

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Animal Welfare Information Center

Bulletin

Summer 2000
Vol. 11, No. 1-2
ISSN: 1522-7553

CONGRESS IN SESSION

- **H.R.1501** To provide grants to ensure increased accountability for juvenile offenders.

Introduced on April 21, 1999, by Bill McCollum (R-Florida) and was referred to the Committee on the Judiciary. As of April 11, 2000, the bill had passed the Senate with an amendment and a House Conference was meeting to resolve differences. This act may be cited as the "Violent and Repeat Juvenile Offender Accountability and Rehabilitation Act of 1999."

SEC. 1520. APPLICATION OF PROVISION RELATING TO A SENTENCE OF DEATH FOR AN ACT OF ANIMAL ENTERPRISE TERRORISM.

Section 3591 of title 18, United States Code (relating to circumstances under which a defendant may be sen-

(Legislation cont'd p. 21)

ALSO IN THIS ISSUE...

AltWeb-Alternatives	p. 9
Humane Education Loan Program	p.10
Foundation Funding for Refinement	p.12
OECD Humane Endpoints Guide	p.14
International News	p.14
APHIS West Nile Virus Safety Tips	p.17
USDA Pain and Distress Extension	p.17
USDA Pain and Distress FR Notice	p.18
1999 Animal Welfare Report	p.18
APHIS Employee Survey-IACUCs	p.20
Senate Report on Cockfighting	p.26
Grants	p.28
Paper Trails Protect Pets	p.28
Announcements	p.29
Animal Welfare Stays at NIH	p.31
AWIC AWA Workshops for 2001	p.32

Disaster Planning for Research and Laboratory Animal Facilities

by
Sebastian E. Heath, VetMB, Ph.D., DACVIM, DACVPM
Washington, D.C.

<http://www.animaldisasters.com>
sebastian.heath@worldnet.att.net

Introduction

Since 1996, the Institute of Laboratory Animal Resources (ILAR) Guide for Care and Use of Laboratory Animals recommends that research and laboratory animal facilities have a disaster preparedness plan. This is a prudent recommendation, because over US\$10 billion a year are spent at nearly 2,000 facilities on biological research involving animals in the United States. Protecting this huge investment in biological research is vital if the United States is to remain at the forefront of biological research in the world.

The value of disaster preparedness to laboratory animal facilities has been highlighted in recent years, because of several large scale disasters that have impacted the U.S. research investment. Examples of recent large scale disasters that have impacted research facilities include the Northridge, California, earthquake (1994), Hurricane Opal (1995) (1), Red River, Minnesota, floods (1996)(2), New York heat wave (1997)(3), Bowling Green, Kentucky, tornadoes (1998)(4), west central Indiana blizzards (1999), and a break-in by animal rights activists in Puyallup, Washington (1999)(5). In addition to these incidents, several forums at national meetings (6) and publications (7) have raised awareness of the need for disaster preparedness in research animal facilities.

Since 1998 the Federal Emergency Management Agency (FEMA) has sup-

ported the Disaster Resistant Universities initiatives (8). FEMA has made this commitment also in an attempt to protect Federal investment in U.S. research. The Disaster Resistant Universities initiative is currently in its second year of funding. To date the focus of this program has been on protecting human safety; providing continuity of research, teaching, and service activities; and sustaining community economies

Clearly, ILAR and FEMA have similar interests in protecting research; however, they have different priorities. The emphasis of the Disaster Resistant Universities initiative has been on strengthening critical infrastructure, the benefits of which are distributed over long periods of time. By contrast, the emphasis for the care of research animals in disasters is to save animal lives and ongoing research, which may only be possible within a short (12-48 hour) window of time. There are also differences in expertise in disaster preparedness. Since the late 1970's emergency management has emerged as a profession with a mission and track record of systematically increasing the level of disaster resistance of communities and businesses. By comparison, there is still a critical need in the (biological) research community for guidelines on how to develop and implement effective Emergency Operations Plans (EOPs)

The purpose of this article is to exemplify how the principles of emergency management apply to emergency

operations planning at research animal facilities. This summary is also intended to provide a pragmatic basis for EOP development by persons responsible for developing disaster preparedness plans at laboratory and research animal facilities.

The Application of Emergency Management Concepts to Laboratory and Research Facilities

Legal Concepts

Emergency Operations Plans are mandated

Most EOPs have a legal basis. In a formal EOP, the legal basis for the plan is stated in references to documents that contain the mandate for having a plan and identify any parties that play a role in the disaster response and preparedness. Legal references relevant to research animal facilities include obligations to comply with the Animal Welfare Act, ILAR guidelines to have a disaster preparedness plan, Association for the Accreditation and Assessment of Laboratory Animal Care International (AAALAC) certification standards, institutional environmental health and safety or Occupational Safety and Health Administration (OSHA) standards, and other institutional documents, such as mission statements to perform research, teaching and service activities, and empowerment of institutional security and fire departments.

The importance of legal statements goes beyond establishing the authority under which an EOP exists. By having a formal (signed) representation in a plan, multiple stakeholders are given the opportunity to contribute to planning for and responding to disasters. This buy-in increases the practicality of a plan and reduces grounds for liability litigation in the event of a disaster.

Concepts of Disaster Preparedness

Regardless of the cause of most disasters the impacts are similar

Although large-scale incidents attract widespread attention, emergency management agencies have long recognized that regardless of the cause (and scale) of most disasters their impacts are often similar. For example, many different causes of natural and technological disasters can lead to common impacts, such as power failures, failure of heating and cooling systems, chemical spills, insufficient staff, security breaches, and animal escapes.

Because the impacts of many disasters are similar, emergency managers have adopted an "all-hazards" approach to disaster preparedness and response. All-hazards preparedness focuses on preventing likely and common effects from any type of disaster, and on reducing the likely consequences resulting from these effects.

Disasters invariably lead to functional (operational) disruptions

The impacts of disasters in turn lead to predictable disruptions (consequences) in functions that are necessary to maintain an appropriate standard of animal care and research continuity. Examples of disruptions in research animal facilities include injury and death of animals, contamination of tissue cultures, temperature fluctuations in incubators, inadvertent thawing of speci-

mens stored in freezers and refrigerators, deviations from research protocols, and loss and corruption of data.

Effective EOPs, therefore, aim to minimize the risk of disruptions due to any cause. This approach is called function-based planning. Function-based planning is different and more effective than incident-based planning. Incident-based plans are frequently developed in response to a disaster or prepared for a limited number of scenarios—for example, hurricanes and floods, but not fires—and, therefore, increase vulnerability to unexpected disasters.

Everyday preparedness is the best protection against extraordinary events

Understanding that disasters manifest themselves principally as functional disruptions, it is not hard to imagine that disasters affect the weakest function first. Examples of the weakest functions are minor inconveniences and disruptions that are often tolerated, such as unexpected staff absenteeism; short term failure of power, heating, or cooling; and security breaches. However, when disaster strikes, these minor inconveniences frequently preoccupy response and recovery efforts.

Therefore, a useful initial step in disaster preparedness planning is to identify and correct common causes of disruption first. The elimination of existing and common causes of everyday disruptions is an effective way to increase the threshold at which disasters lead to major disruptions. Once common causes of disruptions have been addressed, further attention can be given to identifying and preventing cataclysmic (and often hypothetical) events.

Effective preparedness is hierarchical

Effective preparedness starts with personal preparedness (personal safety, preparedness at home, ability to come to work), followed by worksite preparedness (continuity of animal care and research, meeting environmental and health safety and OSHA standards), and culminates in community preparedness.

Personal preparedness is the first step in creating a culture of disaster preparedness in the workplace. Materials that promote personal disaster preparedness are published by the American Red Cross and FEMA (9). These publications can be distributed to employees and researchers. The relevance of these materials is to convey an understanding that personal disaster preparedness is the basis for providing animal care in a disaster as well as sustaining research activities.

Disaster preparedness in the workplace seeks to reduce direct and indirect losses resulting from disasters. Direct losses include injury and death of humans and animals, damage to buildings and equipment, loss of research data, and delays in the publication of scientific data. Indirect losses from disasters include a loss of competitive edge in research, loss of institutional reputation, and decreased local economy as trade with local vendors is reduced. Reducing direct and indirect losses should be the overall goal of an EOP. Losses are smallest when the disruptions to animal care and research are minimized.

When disasters shut down research facilities, the disaster also indirectly affects the institution as a whole and the community that provides services and supplies to the institution. Therefore, the community in which a research facility is located is the ultimate beneficiary of better disaster preparedness. Community preparedness involves an integrated approach to planning involving personal preparedness among staff and researchers,

workplace and institutional preparedness, and contingency plans to sustain community economies involved in providing services and supplies. FEMA initiatives, such as "Disaster Resistant Universities" and "Project Impact" (10), have greatly enhanced community disaster resistance and serve as models for community preparedness.

Training consists of sequential exercises that build on one another

Similar to the hierarchical basis for effective preparedness, effective disaster preparedness training is progressive. The simplest and first level of exercise is an orientation, followed by table top exercises and drills, then functional and full-scale exercises. FEMA recommends a Comprehensive Exercise Program with a progressive sequence of exercises of increasing complexity, which is repeated every 2 to 4 years (11).

A common mistake in designing exercises is to let enthusiasm take over and to plan for a full-scale exercise early in the planning process. Overzealous full-scale exercises often accomplish little, because they lack specific objectives and goals. The goal of all exercises is to improve on weak areas that have been identified in previous exercises and incidents.

Identifying specific objectives for training and exercises is part of exercise design and planning. Objectives can be as simple as a review of procedures or more complex, such as testing specific functions (drills) such as establishing communications or evacuating animals in cages along fire escape routes. Courses on how to prepare exercises are available through most states' public safety training institutes or emergency management agencies. It is highly recommended that training in exercise design be sought before planning more than an orientation.

It is not a matter of if disasters will occur, but of when they will occur

This assumption (and years of experiences) has led emergency managers to the understanding that disasters are cyclical events (12) (fig. 1). The importance of this cyclical concept is that facilities are always in at least one of the four phases of a disaster: mitigation, preparedness, response, or recovery. The cyclical nature of disasters implies that planning does not end with the publication of a document (plan). Disaster preparedness is a continual effort in which the phases of the cycle of emergency management are constantly being anticipated, reviewed, and improved.

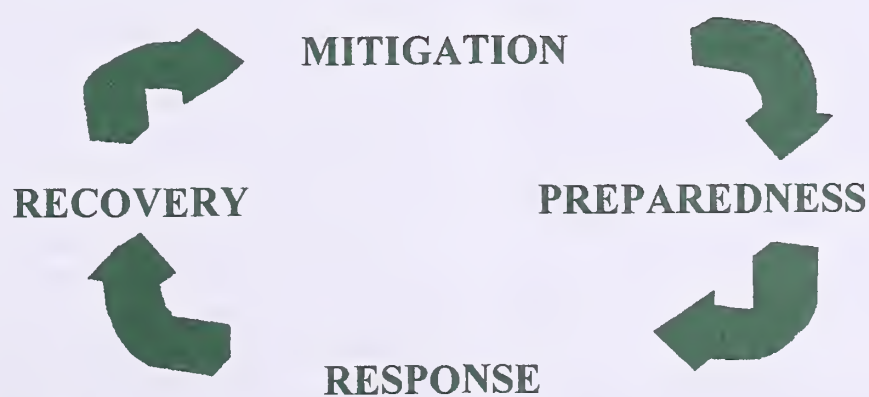
Concepts of Disaster Response

Disaster-related responsibilities should be assigned to positions not persons

Function-based planning includes assigning planning and response responsibilities to positions rather than individual persons. People go on vacation, leave, or can be otherwise unavailable, whereas their position and their responsibilities generally do not.

To ensure that planning and response responsibilities are met by positions rather than persons, these responsibilities have to be defined in employees' job descriptions. Job descriptions should also include methods to transfer responsibilities when people go on leave. When positions fulfill critical functions, such as feeding and watering research animals, these jobs should be defined as "essential" within the institution. By making these positions essential, in the event of a large-scale disaster, quali-

Figure 1. The cycle of emergency management.



Mitigation: Measures that prevent or reduce the impact of disasters.

Preparedness: Planning, training, and educational activities for things that cannot be mitigated.

Response: The immediate aftermath of a disaster, when business is not as usual.

Recovery: The long-term aftermath of a disaster, when restoration efforts are in addition to regular services.

fied persons will be allowed access to the facilities and be able to complete their duties.

The best responders perform similar duties in disasters as they do every day

The most effective persons to respond to disrupted operations at an animal care or research facility are the same persons who regularly perform these duties. By contrast, the least effective persons to respond to disasters are those who get called only in a disaster. Personnel who regularly work in a particular area are also usually the most experienced at effective problem solving in that area.

The reliance on experienced persons to respond to disasters also reduces the need for developing extensive Standard Operating Procedures (SOPs) for special use in disasters, because these SOPs have usually already been established for other circumstances. For example, there is little need for specific guidelines for feeding and maintaining laboratory animals in disasters, if these tasks can be completed by already competent staff. However, to ensure that qualified persons can complete these tasks, an EOP would specify that regular care providers are the designated care providers for animals in disasters, and they perform these duties by being given access to the facilities and by relying on existing SOPs. Much time in writing a plan can be saved by incorporating existing SOPs as appendixes to the EOP.

During the response (immediate aftermath) phase of a disaster not all issues can receive equal attention

In most cases, the losses associated with disasters are caused by: loss of data (for example, animals, records), lack of access (for example, to facilities, animals, and data), and shortage of personnel (for example, staff cannot come to work or are overwhelmed by the number of tasks placed on them). Because of predictable multiple causes of losses, planning should address each potential cause and establish criteria to prioritize areas in which greatest losses should be minimized first.

The decision on where to focus efforts in an attempt to selectively reduce losses is not easy. In animal research facilities, disasters may necessitate making decisions that balance animal welfare with scientific progress. For example, the appropriateness of saving a few unique transgenic animals or animals in the end phase of a long-term study may need to be weighed against saving a large number of standardized animals not currently in a trial. Criteria used to decide priorities for response are best identified in collaboration with appropriate stake holders, including health and safety officers, laboratory animal veterinarians, researchers, and representatives of the Animal Care and Use Committee.

The Incident Management (Command) System is the most effective method to coordinate the response to a disaster

During the response phase to a disaster, there will be competition for scarce resources. Decisions on how to prioritize use of resources may seem overwhelming. However, the burden of choices is greatly reduced through prior planning and by using a centralized structure for communications, chain of authority, and decision making during the response.

Emergency managers make effective decisions by using the Incident Management System. The Incident Management System consists of an Incident Manager (Commander), who has on-site decision making power over the use of resources. An-

swerable to the Incident Manager are Chiefs of Operations, Planning, Logistics, and Finance. These sections are responsible for executing orders, gathering intelligence, supporting responders, and procuring resources, respectively. In addition, a Safety Officer oversees human safety and can intervene whenever human safety is at risk. A Public Information Officer handles all communications between the Incident Manager and the public and the media.

Some hospitals have adapted the ICS, the Hospital Incident Command System (HICS), to meet specific issues arising in medical facilities during disasters. In these institutions, emergency programs for laboratory animals should be integrated into the HICS already in use.

Training in incident management is available from State and local emergency management agencies, as well as many institutional fire and law enforcement (security) departments.

A manageable span of control prevents over-extension of responsibilities in a disaster

Demands on personnel at all levels can be overwhelming in a disaster, even when planning has occurred. A common shortcoming in response to disasters is that responders take on more responsibilities than they can manage. This is particularly true for animal care providers, many of whom will risk personal harm to prevent animal injuries or loss of animal life. As a result of being over-extended, staff may not be able to perform any of their tasks adequately.

Emergency managers prevent over-extension by imposing a manageable span of control.

A manageable span of control dictates that one person does not oversee more than five others. A manageable span of control, therefore, determines the basic structure of the Incident Management System.

During the recovery (long-term aftermath) phase of a disaster, multiple activities need to be accomplished

During the recovery phase of a disaster, staff often take on additional duties and activities in addition to their regular jobs. These extra duties consist of activities needed to return service back to normal and are in addition to the service and research activities provided before the disaster. Because of this extra work load, many employees feel most pressured during the recovery period. Frustrations and complaints escalate, frequently leading to employees leaving their jobs, resulting in costly staff turn-over and retraining of new employees.

Prior planning will alleviate some of the stress of the recovery period. However, in addition to an increased work load, the psychological impact of a disaster associated with loss of animal life, animal suffering, combined with feelings of a limited ability to do anything about it may need to be addressed. Emergency managers use critical incident stress debriefing (13) and Red Cross mental health counseling services to help them deal with these stresses. Stress counseling is most effective when it has been incorporated as part of regular disaster preparedness efforts.

Activities to Initiate Emergency Operations Planning

The goal of emergency operations planning is to increase the level of resistance to disasters. Emergency response is most

effective when it has been planned and regularly exercised. By adhering to the principles outlined in this article and by making a diligent effort to constantly improve disaster preparedness plans and response procedures, liability can also be reduced. Following are specific activities that research facility planners can use to start developing an EOP for their institution.

Establish an advisory committee

To ensure that disaster preparedness plans and the response to disasters are compliant with the many policies and regulations that govern animal care in research and laboratory facilities, a planning advisory committee should be established. This committee should consist of representatives of all groups responsible for creating and enforcing these policies and regulations, as well as animal care providers. This committee should meet regularly to review the planning progress and to ensure that disaster preparedness plans comply with the regulations and policies governing the care of animals in research.

The advisory committee should also act as a resource in a disaster to ensure that decisions made to protect animals and research activities comply with existing regulations. To ensure that the members of the committee can be a resource in a disaster, a method for contacting all committee members should be established and tested early in the planning process.

In a large-scale disaster, members of the planning committee may assemble at an emergency operations center (EOC). Representatives of the institution's legal, executive, and administrative branches are located at the EOC. The role of the EOC is to be an informational resource on institutional regulations and policy and resource procurement for the Incident Manager. As part of planning, it should be determined who has access to the EOC in a disaster, because an EOC usually has restricted access.

Alternatively, a virtual EOC can be established, in which the Incident Manager knows where he or she can obtain appropriate information to make decisions in a disaster that comply with regulations. A carefully selected planning committee and reliable methods to contact them may suffice as a virtual EOC.

Conduct a vulnerability assessment

Efficient use of time and resources is as important to emergency operations planning as it is to any other aspect of research and business. Therefore, it is important to systematically prioritize planning efforts. A vulnerability assessment is the process by which to prioritize disaster preparedness efforts.

A vulnerability assessment is a four-step process. The first step is to identify hazards and other causes of disruptions to animal care. The second is to identify resources that minimize disruptions. The third step is to quantify potential losses. The fourth step uses the information gathered in the previous steps to create a risk index.

In many research facilities with a large variety of animals and facilities, it may be necessary to initially consider the vulnerability of each type of animal husbandry system separately.

Identifying hazards and other causes of disruption to animal care and research

This process consists of identifying and preventing potential causes of catastrophic loss, as well as other likely causes of disruption. The goal of this part of the vulnerability assessment

is to rank animal care and research units based on the likely frequency and duration of disruptions.

Identifying and preventing catastrophic losses

Identifying and preventing catastrophic losses should be the initial focus of a vulnerability assessment. Areas in which catastrophic losses can occur are best identified by inspecting each facility with emergency response and preparedness personnel, such as fire marshals, safety officers, and architects. During these inspections, the vulnerability to catastrophic losses to humans, animals, and research data can be ascertained by considering worst-case scenarios, such as fires, floods, or prolonged power outages, and trying to recognize threats to human (staff and responders) and animal safety during evacuations.

Typical examples of facilities that are vulnerable to catastrophic loss include buildings that do not meet current standards of construction to withstand likely regional geophysical hazards, such as earthquakes, floods, and hurricanes; rooms without fire suppression systems; and animal care facilities that can only be accessed via an elevator. If these or similar vulnerabilities to catastrophic loss are identified, then appropriate mitigation measures can be taken, for example, to retrofit or rebuild the facilities, or to relocate animals. Preparedness activities that protect against catastrophic loss of data include repeated reminders to researchers to make multiple copies of their records and to store data at multiple sites.

Identifying and prioritizing other causes of disruption

The two most common causes of disruption to animal care and research are a failure of infrastructure (primary and backup utilities, access and egress routes) and a shortage of personnel (flu epidemics, inability to access work). Hazards and other causes of disruptions to animal care can be identified from a number of sources. Data on the frequency and duration of disruptions are available from local emergency management agencies and institutions. These usually have records that summarize major geophysical events that have disrupted the community, such as dates and duration of weather advisories and conditions that led to traffic curfews, or business, school, and university closures. Institutional sources of information include animal care logs and surveys of the animal care staff.

Identifying resources that minimize disruptions

The goal of this part of the vulnerability assessment is to rank animal care and research units according to their dependence on backup utilities. Examples of resources that minimize losses include generators that provide backup power, heating and cooling; alternative housing facilities; feed reserves; and current data backup.

Resources that minimize disruptions to animal care can be identified during inspections of individual husbandry facilities. The effectiveness of backup resources should be viewed in the context of the types of animals and their husbandry needs. For example, species that live in controlled environments depend on a reliable source of heating and cooling. Lack of backup utilities

to sustain their environment makes these animals and related research vulnerable to disasters. By comparison, range cattle may not depend on a controlled environment, but in severe weather rely on staff being able to access their paddocks to provide feed and water. In this case the inability to access pastures would put these animals and related research projects at risk.

An estimation of the costs of disasters

An estimation of the costs of disasters involves compiling an inventory of animals, supplies, and research investments. The cost of disruptions and loss of data can be subjective, because it includes losses associated with death and injury of research animals, some of which may be priceless if they promise to lead to patents, progress in research, and future funding and, last but not least, have potential to contribute to fulfilling the perceived priorities of the institution. Additional losses are associated with economic impacts of reduced trade with service and supplies vendors in the community.

The risk index

The risk index, then, is the product of the rank of disruptions, the rank of dependence on backup utilities, and the cost of potential losses for all animal care and research units. The higher the risk index, the higher should be the priority for disaster preparedness efforts in that area. The risk index is also a useful tool for convincing reluctant administrators to support disaster planning activities.

Attend emergency management classes

Emergency planners at research animal facilities can gain a professional insight into emergency preparedness via their State's emergency management agency. Most States offer free training in emergency management and welcome new professions to participate. It is recommended that laboratory animal facility staff take the "Animals in Disasters" Independent Study courses by FEMA (14) and attend professional courses on emergency operations planning, incident command, exercise design, and critical incident stress debriefing (13).

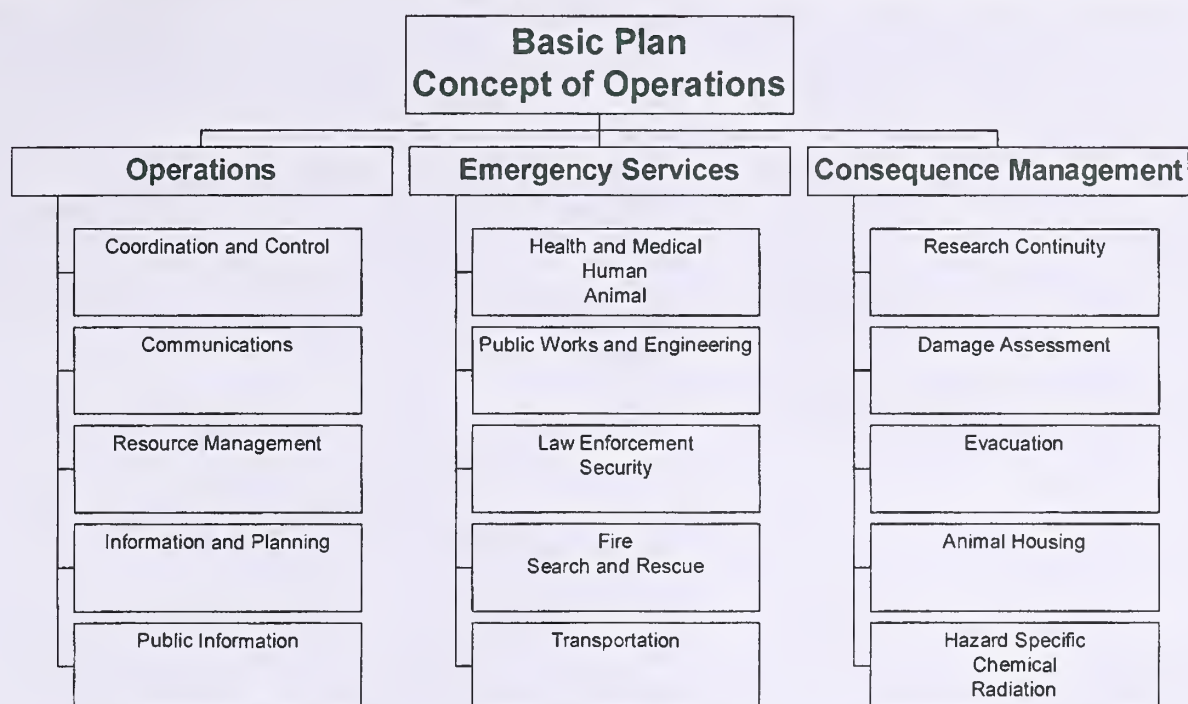
Table 1. Examples of a Concept of Operations for an Emergency Operations Plan for animal research facilities.¹

Problem	Need	Task	Resources ²	Primary Emergency Support Function
Heating or cooling failure	Prevent animals from overheating or cooling	Restore heating or cooling	Back-up generator; building maintenance crew; procedure for contacting appropriate personnel	Public works and engineering (refrigeration, heating)
Personnel snowed in at home	Prevent respiratory disease	Provide personnel with access to building	Snowplows; local police (to escort staff to work); job description defining animal care staff as "essential"	Animal health and medical
Power failure	Access to tissue cultures is essential within 2 hours time window	Electronic key access to building needs to be overridden	Mechanical key backup; institutional security; procedure for ensuring that security is maintained.	Public works and engineering (electric power)
Rumors of horrific acts against animals	Control rumors	Hold press conference and clarify facts	Press conference; public liaison officer; media tour of facilities prior to incidents	Public information
Exposure of response personnel	Evacuation of animals in a trial using carcinogenic or radioactive compounds	Provide response personnel with appropriate information to protect safety	Up-to-date signs through building; environmental management/OSHA staff; evacuation procedure for animals in trials	Hazard specific (chemical, radiation)
Feed and water has become contaminated	Continue nutritional study	Identify alternative feed and water supplies	Inventory of feed on campus; animal care staff, laboratory animal veterinarian; principal investigator; research protocol	Research continuity

¹ This part of the EOP is a living document that should be continuously reviewed. Note that the problems, needs, tasks, and resources are more or less independent of the cause of the disaster.

² Examples given are for physical, personnel, policy resources

Figure 2. Emergency functions represented in an Emergency Operations Plan for animal research facilities.



Construct potential disaster scenarios

An effective method to start preparing a formal EOP is to develop disaster scenarios using the “problem, needs, task, and resource” approach. This concept is based on the principles of all-hazards planning, in which it is assumed that the loss of function is more or less independent of the cause of the disaster (the incident). The definitions of these terms are:

- Problem: Functions that become disrupted in a disaster.
- Needs: Actions that will remedy the problem.
- Task: Specific intervention to meet the needs.
- Resource: Persons, materials, and policies required to complete the task.

Table 1 gives some examples of how the “problem, needs, task, and resource” concept can be used to develop an EOP. Emergency Operations Plans can also be formatted using the “problem, needs, task, and resource” approach.

Develop an Emergency Operations Plan

An EOP should include at least the following sections:

1. Reference to the plan’s legal basis
2. Assumptions under which the plan is activated
3. Concept of operations

Compiling appendices, in which resources (physical personnel and policies), SOPs, and reference materials are summarized is another constructive activity to increase awareness of the resources available for disaster response.

State emergency management agencies offer professional courses that will help laboratory animal managers become proficient at developing an EOP for their institution.

Legal references

The first section of a formal EOP should contain references to the legal basis for having a plan. Legal references should be approved and signed by appropriate representatives.

Plan activation (assumptions)

A formal plan should include a statement that clarifies under which conditions the plan is activated. Such a statement may include a phrase such as “any cause that threatens the implementation of the legal mandates and any potential or actual disruption to animal care and continuity of research, teaching, and service.” Examples of these threats and causes of disruption include geophysical and technological hazards and security breaches.

Concept of Operations

Once some potential disaster scenarios have been developed and a vulnerability assessment has been completed, a Concept of Operations can be written. The Concept of Operations section is the core of the plan. Here, causes of function disruptions (problems) and their remediation (needs) are defined and tasks needed to correct any problems and resources to complete these tasks are identified. Primary and support Emergency Support Functions (ESFs) are grouped into operations, emergency services, and consequence management (Figure 2, Table 1).

Writing the Concepts of Operations requires time and thought, and should be a collaborative effort. However, a Concept of Operations section does not have to be long, and it should be simple to read and understand. Initial attention should be given to functions that have been identified to be common and realistic causes of disruption.

Plan review

The EOP should be reviewed at least annually in a meeting involving all possible stakeholders. Regular review of an EOP is intended to review procedures and availability of resources and can serve as a starting point for higher level exercises. A successful review of an EOP will identify areas that can be improved upon and, by correcting these areas, will increase the threshold of resistance to disasters.

Conclusions

ILAR and FEMA have similar interests in mitigating the impact of disasters on the research community. Many of the concepts used by emergency managers are transferable to emergency preparedness programs in laboratory animal facilities, and can be used when developing an EOP and for training. Progressive disaster preparedness activities that institutions can engage in are: establish a disaster planning committee, identify a legal basis for an EOP, define the assumptions under which a plan would be activated, conduct a vulnerability assessment, define and organize Emergency Support Functions, and train. There is a critical need in the biological research community for comprehensive guidelines on how to develop and implement effective EOPs.

References

1. Gerritty, L.W. (1998). Expecting one disaster and getting another. *Lab Animal* 27(1):29.
2. Suzik H.A. (1997). Flood relief a multifaceted effort. *Journal of the American Veterinary Medical Association*.
3. Silverstein, S.C. The light at the end of the Washington Heights blackout. <http://www.faseb.org/opar/newsletter/10X99/guest.html>
4. Ballard, M.D, S.M. Smith, H.F. Johnson, and F. Range (1999). Crisis Management Planning. *Disaster Recovery Journal* Winter: 49-51.
5. AVMA (2000) Activists vandalize avian health laboratory. *Journal of the American Veterinary Medical Association*.
6. Leonpacher, R.J. (1991). Disaster planning in animal facilities. *AALAS Bulletin* 30(6):20-21.
7. Vogelweid, C.M. (1998). Developing emergency management plans for university laboratory animal programs and facilities. *Contemporary Topics in Laboratory Animal Science* 37(5):52-56.
8. Comerio, M. and S.K. Nathe (1999). A disaster resistant university - The first of its kind. *Natural Hazards Observer* 24(1):1-3.
9. American Red Cross (ARC), Federal Emergency Management Agency (FEMA) (1992). Your family disaster plan. FEMA L-191, ARC 4466. Federal Emergency Management Agency: Washington, DC.
10. Witt, J.L. (1998). Project Impact - Building a Disaster Resistant Community. Federal Emergency Management Agency: Washington, DC.
11. Federal Emergency Management Agency. Comprehensive Program Policy Overview (July 1995). Federal Emergency Management Agency: Washington, DC.
12. Heath, S.E. (1999). *Animal Management in Disasters*. Mosby: St. Louis. Missouri, pp. 139-146.
13. International Critical Incident Stress Foundation. <http://www.icisf.org/>
14. Federal Emergency Management Agency. <http://www.fema.gov/emi/crslist.htm> ■

Animal Management in Disasters

This book for emergency management personnel and people in the animal care community is written by Sebastian Heath, VetMB, MPVM, who is perhaps the foremost authority on animal disaster management. In a crisp, clear, easy-to-read manner he presents information on animal management in natural and man-made disasters, such as hurricanes, tornadoes, heat and drought, wildfires, earthquakes, floods, winter storms, building fires, vehicular accidents, nuclear contamination, and hazardous spills.

The book is divided into 8 sections covering:

- Myths and realities in disasters involving animals;
- Overview of hazards and precautions to be taken to minimize damage;
- A close look at businesses in the animal care industry—costs of disasters, preparedness and integration in the community emergency management plans;
- Structure and development of emergency management plans or systems;
- Principles of disaster relief;
- Management of animals in disasters;
- International perspectives; and
- Appendices providing sample State and county disaster plans, summaries of State liability laws, important resources and contacts, and a proposed veterinary incident management system.

Numerous graphics and photos accompany the text and clearly illustrate the described procedures, equipment, and principles. The cost is \$39.95. To order, call Mosby's at toll-free: (800) 426-4545 (U.S. only), or e-mail: customer.support@mosby.com. (ISBN: 155664411) ■

Useful Web Sites for Disasters

American Red Cross Disaster Services

<http://www.redcross.org/disaster/safety/guide.html>

Federal Emergency Management Agency (FEMA) Virtual Library and Electronic Reading Room

<http://www.fema.gov/library/lib07.htm>

Florida Animal Disaster Planning Advisory Committee

<http://www.fl-adpac.org/>

Humane Society of the United States

<http://www.hsus.org/disaster/index.html>

University of Colorado Health Sciences Center Animal Care & Use Program

<http://www.uchsc.edu/sm/animal.index.html>

University of Florida Emergencies

<http://nersp.nerdc.ufl.edu/~iacuc/emergency.htm>

University of Florida Institute of Food and Agricultural Sciences and the Florida Cooperative Extension Service

<http://disaster.ifas.ufl.edu/>



<http://altweb.jhsph.edu/>

Altweb is a collaborative effort funded by the Alternatives Research & Development Foundation, the Doerenkamp - Zbinden Foundation, the Humane Society of the United States, the Office for Laboratory Animal Welfare at the National Institutes of Health, and the Procter & Gamble Company. It is being developed by the Center for Alternatives to Animal Testing at Johns Hopkins University, in collaboration with the Altweb Project Team (see sidebar), to serve academic, industrial, and government scientists; educators; the media; and the general public.

Altweb is intended to foster development of scientifically acceptable in vitro and other alternatives to animal testing. Alternatives are defined as methods that reduce animal use, replace whole animal tests, or refine existing tests by minimizing animal distress.

Need help locating alternatives databases or funding sources? Check out Science & Regulations. Want to learn about the latest software and other computer resources available for your junior high? See Educational Resources. Want to know more about the history of the alternative movement? See General Information.

This site will change rapidly, based on your feedback. So check back often. We hope to make Altweb increasingly comprehensive and interactive.

ALTERNATIVES TO ANIMAL TESTING

REFINEMENT ❖ REDUCTION ❖ REPLACEMENT

The Altweb Project Team is responsible, together with the web site manager and web site editor, for providing the vision and direction for the site. Our goal is to provide a comprehensive global resource, with scientifically accurate, timely information about alternatives.

The project team includes representatives from the following organizations:

- Animal and Plant Health Inspection Service (APHIS), USDA
- Animal Welfare Information Center (AWIC), Agricultural Research Service, USDA
- The Canadian Council on Animal Care (CCAC)
- Center for Laboratory Animal Welfare (CLAW) at the Massachusetts Society for Prevention of Cruelty to Animals
- Environmental Protection Agency (EPA)
- Food and Drug Administration (FDA)
- Fund for the Replacement of Animals in Medical Experiments (FRAME)
- Humane Society of the United States (HSUS)
- Interagency Coordinating Committee for the Validation of Alternative Methods (ICCVAM)
- Johns Hopkins Center for Alternatives to Animal Testing
- Laboratory Animal Unit, Norwegian College of Veterinary Medicine, Oslo
- NORINA
- National Library of Medicine (NLM)

- Office for Laboratory Animal Welfare, NIH
- Procter & Gamble Company
- Scientists Center for Animal Welfare (SCAW)
- University of California Center for Animal Alternatives
- University of Utrecht, The Netherlands
Netherlands Centre for Alternatives to Animal Use
PREX Online Databases
- ZEBET

Web Sponsors

- Alternatives Research & Development Foundation
- Geraldine R. Dodge Foundation
- Humane Society of the United States
- Office for Laboratory Animal Welfare, National Institutes of Health
- Procter & Gamble Company
- Regina Bauer Frankenberg Foundation for Animal Welfare

We invite you to join the Altweb team as a sponsor, project team member, or supporter of CAAT programs. For more information about sponsoring the web site or joining the project team, please contact us at Altweb, c/o Center for Alternatives to Animal Testing, Johns Hopkins University, School of Hygiene and Public Health, 111 Market Place, Suite 840, Baltimore, MD 21202-6709 USA, tel: 410-223-1612, fax: 410-223-1603, e-mail: altweb@jhsph.edu. ■

The HSUS Humane Education Loan Program

by

Brandy Richardson, Daniel Kossow, and Jonathan Balcombe
Animal Research Issues Section
The Humane Society of the United States

Whatever one's personal view of the commonplace biology classroom exercise of dissecting animals, we must acknowledge that it is a practice to which increasing numbers of students are objecting. The basis of complaint may be an moral one relating to the animal's untimely death, or an environmental one based on a concern that a frog, for example, was removed from its natural habitat to be dissected. Or it could simply be that the student is not comfortable with the prospect of cutting into the skin of a once-living creature. Whatever the reason, the Humane Society of the United States believes that biology education will benefit when alternatives are available to accommodate students with any or all of these reasons.

It is this belief that impelled the organization to launch, in 1995, a program called the Humane Education Loan Program (HELP) (previously called the Alternatives Loan Program). Realizing that availability of alternatives is often the greatest stumbling block for students who object to dissection and for teachers wanting to accommodate them, our aim for HELP was to loan, free of charge, dissection alternatives to students or teachers who request them. By doing this, we could benefit both students and teachers, foster development and refinement of alternatives by gaining increased exposure and evaluation of these materials in the classroom, and, because HSUS is an animal protection organization, hopefully bring some benefit to animals as well.

History of HELP

Prior to 1995, HSUS had accumulated a handful of dissection alternatives sent from manufacturers eager for us to be aware of their new products. To operate an effective loan program, however, we needed a broader array of materials in our inventory, so we set about contacting companies and asking for donations of their materials and permission to lend them. Industry response was positive. To date, companies have donated 45 items, with a retail value exceeding \$7,000. An industry grant of another \$5,000 has allowed us to substantially increase our inventory with additional purchases. Currently, our inventory totals 284 items representing 17 animal species and several learning disciplines within the biology sphere (Table 1).

Progress Report

Since its 1995 launch, participation in HELP has undergone steady growth. To date, we have loaned over 600 items to more than 220 individuals, including students, teachers, and parents in 31 states and 5 countries.

As new alternatives have entered the marketplace, our inventory has grown and diversified. Available materials include CD-ROMs with titles such as *The Digital Frog 2*, *Dissection Works*, and *The Ultimate Human Body*; videos like the *Cat Anatomy Instructional Videotape Series*, which provides an exhaustive review of the anatomy of the domestic cat; three-dimensional models, such as *The Great American Bull-*

frog, and the *PVC Rat*, a sophisticated replica with finely molded replaceable soft plastic organs and vessels designed for practicing microsurgery technique. In all, our alternatives represent 14 species: cat, clam, crayfish, earthworm, fetal pig, frog, grasshopper, human, perch, pigeon, rat, shark, sheep, and sea star.

Other Activities

HSUS continues to work with over a thousand students and teachers yearly. Our teacher-directed activities include attendance at conventions of the National Association of Biology Teachers, and the National Science Teachers Association, where we give workshops and interact with hundreds of teachers who visit our exhibit booth. We also produce an annotated list of humane science fair project topics, and a list of States where dissection laws and policies are in place, and we offer a 6-minute videotape on the dissection issue (220 science teachers requested this video in 1999).

For students, we offer many resources in addition to the HELP. These include: suggestions on how to write letters to the editor and how to approach and negotiate with their teachers, a list of State student choice in dissection laws, a list of published studies that compare animal-use methods with alternative methods, a list of published studies of student attitudes to dissection, a cost comparison of alternatives versus dissection, and an article we published in *The American Biology Teacher* titled "Student/Teacher Conflict Regarding Animal Dissection" and other materials. Many of these materials are of interest to teachers as well. An e-mail discussion group (the Inter-Campus Animal Advocacy Network (I-CAAN)) provides a forum for students to discuss animal issues and share ideas on how best to resolve problems.

Many students carry their personal campaigns a step further by helping to draft dissection choice policies for their schools and universities so that future students can have humane options. These efforts further HSUS's goal of improving life science education for students, teachers, and animals.

Further Information

The HELP program is operated by the Animal Research Issues Section of HSUS. We accept loan requests by phone, letter, or e-mail. To learn more about or borrow items from the Humane Education Loan Program, please contact: Daniel Kossow, Research Assistant, The Humane Society of the United States, 2100 L Street, NW, Washington, DC 20037, phone: 301-258-3042, fax: 301-258-7760, or e-mail: dkossow@hsus.org. A list of currently available materials is available on our web site at http://www.hsus.org/programs/research/animals_education.html.

Table 1. List of currently available items in HELP. Items are suitable for middle (M) or high (H) school, or college (C). Updates can be found at http://www.hsus.org/programs/research/alt_dissection.html.

BRAIN

Videos:

Dissection & Anatomy of Brain H C

CAT

CD-ROMs:

Neotek CatLab (Windows) H C

CatWorks

Virtual Reality Cat

Videos:

Cat Anatomy Instructional Video

Series C

Boreal Cat Dissection M H

Charts:

Boreal Cat Dissection Charts H C

Turtlox Key Card for Cat Dissection

Slides:

Cat anatomy slides

CLAM

Videos:

Dissection & Anatomy M H C

Charts:

BioCam Dissection Chart H C

CRAYFISH

CD-ROMs:

BioLab Invertebrate (includes crayfish) M H

Videos:

Boreal Crayfish Dissection M H C

Biological Dissection (includes crayfish) M H

Charts:

BioCam Dissection Chart H C

DOGFISH

Videos:

Vertebrate Dissection Guides H C

EARTHWORM

CD-ROMs:

BioLab Invertebrate (incl. Earthworm) M H

Videos:

Biological Dissection (incl. Earthworm) M H

Dissection & Anatomy H C

Charts:

BioCam Dissection Chart H C

EYE

Videos:

Dissection & Anatomy of Eye H C

FETAL PIG

Videos:

Boreal Dissection-Fetal Pig

Models:

Fetal Pig

Charts:

BioCam-Chart-Fetal Pig

FLY

CD-ROMs:

Bio-Lab-Fly

FROG

CD-ROMs:

The Digital Frog H C

DissectionWorks (series, includes frog) H C

CompuFrog

Biolab Frog (Mac) M H

Videos:

Vertebrate Dissection Guides H C

Biological Dissection (includes frog) M H

Models:

Great American Bullfrog M H C

Frog (female or male) M H C

Frog Model activity sheets

Charts:

BioCam Dissection Chart H C

Frog Scientific Nerve

Wards Frog (female)

GENETICS

CD-ROMs:

BioLab Fly M H C

Diskettes:

HyperFly (Windows) C

GRASSHOPPER

Videos:

Dissection & Anatomy of Grasshopper HC

Charts:

BioCam Dissection Chart H C

HEART

Videos:

Dissection & Anatomy of Heart

HUMAN

CD-ROMs (for Windows unless noted):

A.D.A.M. Practice Practical H C

A.D.A.M. Interactive Physiology

A.D.A.M. Interactive Anatomy H C

A.D.A.M. Standard C

A.D.A.M. Essentials

Body Works 5.0 M H

Human Anatomy C

Visible Human (Mac) H C

Home Medical Advisor

Visible Man

Nine Months Miracle

The Ultimate Human Body

MedWorks

Biology Lab Series

3-D Body Adventure

Body Illustrated

Heart the Engine of Life

Stanford University-Video Surgery

John Hopkins-Simulation Lab Exer.

Models:

Maniken INTRO M H C

The Virtual Heart

Videos:

Respiratory Care and Pulmonary Function Ed.

PERCH

Videos:

Biological Dissection M H

Charts:

BioCam Dissection Chart H C

PHYSIOLOGY

Computer Diskettes:

Biology Lab. Series (Mac) H C

CD-ROMs:

Muscular Physiology

PSYCHOLOGY

Computer Diskettes:

Op.Rat C

Sniffy the Virtual Rat (Mac) C

RAT

CD-ROMs:

DryLab Rat M H

The Rat-A Functional Anatomy

Anesthesia of Rats

Diskettes:

The Rat Stack (Mac) H C

Videos:

The Rat: A Practical Dissection

Guide H C

Vertebrate Dissection Guides H C

Investigation of a Mammal H C

Charts:

BioCam Dissection Chart H C

Models:

Koken Rat

PVC Microsurgical Rat

SEA URCHIN

Slides:

Sea Urchin Development & Dissection M H

SHARK

Videos:

Vertebrate Dissection Guides H C

SHEEP BRAIN

Charts:

BioCam Dissection Chart H C

STARFISH

CD-ROMs:

BioLab Invertebrate M H

Videos:

Boreal Starfish Video M H C

Charts:

BioCam Dissection Chart H C ■

Foundation Funding for Refinements in Animal Research

by
Eve Lloyd Thompson
Treasurer & Secretary of the Bernice Barbour Foundation

Text of talk given at the National Animal Welfare Education Workshop "Animal Research: Where Does the Buck Stop? Ethics, Economics, and Responsibility," Lake Tahoe, California, October 2-5, 1999

As you may have guessed from the faculty list, I'm not here today because of my earth-shattering intellect or outstanding educational credentials, but I am a trustee of a foundation which funds refinement, reduction, and replacement of research animals. Barbara Orlans has asked me to talk about foundation funding for refinements, which is almost as scarce as funding for conferences on the subject.

One of the reasons there is so little funding by foundations is because no researchers ask us for money. There are a few exceptions, but my colleagues at other funding organizations tell me they rarely see a grant request which even mentions the words.

So how do you find us? How do you get to the people with the money?

It's time consuming, but simple research! There is help out there which can put you in touch with the funders. For example:

AWIC, the Animal Welfare Information Center, located at the National Agricultural Library in Beltsville, Maryland, is charged by Congress with the responsibility of helping those involved with animal welfare to achieve their goals. They are tuned in to funding for animal welfare, including research utilizing animals. The staff is very knowledgeable, and helpful, and you can reach them by e-mail at awic@nal.usda.gov.

They publish a fine newsletter, the most recent of which lists an offer of research animal refinement funding by the Kenneth A. Scott Charitable Trust in Ohio and the Doerenkamp-Zbinden Foundation in Erlangen, Germany. The newsletter is free; just ask to be put on the mailing list.

The Foundation Center headquartered in New York with branches in Atlanta, Cleveland, San Francisco, and Washington, maintains lists of foundations by category of giving. I recently saw the list of those giving more \$100,000 a year for animal welfare which had 277 foundations listed.

It would be interesting to know how many of them received requests for funding any of the 3R's. The Foundation Center's web site is: <http://www.fdncenter.org>.

There are often local guides to foundations in many locales, such as the *Mitchell Guide to New Jersey Foundations*. The Council on Foundations is located in Washington, D.C., with the mission to promote and strengthen organized philanthropy. They too can help seekers of funding.

There are all kinds of web sites which list foundations funding animal welfare. A caution here: many of them do not have accurate information on their site, but usually the name, address and phone number are correct. Armed with that information you can easily find out if the foundation might consider your proposal.

Now, some specifics of which I am aware.

Refinement grants for veterinary and Ph.D. students

The Geraldine R. Dodge Foundation along with the Bernice Barbour Foundation, the Kenneth A. Scott Charitable Trust, the Marilyn Simpson Charitable Trust, the Humane Society of the United States, and the Massachusetts SPCA annually fund 50 \$5,000 summer grants for veterinary students. The program is called "Frontiers in Veterinary Medicine." The project selected by the students must advance the humane treatment of animals, and each year at least one of the Dodge fellows selects some type of laboratory animal refinement as their summer research project.

The Parks Foundation funds grants of up to \$30,000 for stipend and expenses for a 1-year veterinary internship in animal welfare. The Parks Foundation also funds a fellowship for graduate veterinary students already enrolled in a Ph.D. program concentrating on animal welfare.

The Bernice Barbour Foundation funds a Ph.D. intensive training program with an emphasis on rodent behavior research for 4 years at \$35,000 per year. This is to improve the welfare of laboratory rodents and to fulfill the need for behavioral phenotyping of genetically altered mice. This program is at the University of California Davis Center for Comparative Medicine. Dr. Stephen Barthold heads the Center.

Funding for alternatives or refinements in graduate and secondary school educational institutions

Many university departments which use animals in teaching have received foundation support for alternatives. There are many such programs in veterinary and medical schools, and the Dodge, Parks, Barbour, and Simpson Foundations have funded them regularly. Interestingly, many liberal arts colleges are now asking for such funding for their psychology departments.

Funding for laboratory animal refinements

Frankly, it's sparse. But, the American College of Laboratory Animal Medicine (ACLAM) makes grants in the \$10,000-\$12,000 per year range. In 1999 they funded "Effects of social environment on behavioral and psychological indices of surgical stress" at Johns Hopkins, and "Pharmacokinetics and pharmacodynamics of intrathecal morphine in calves undergoing thoracotomy for ventricular assist device placement" at Texas A&M. To reach ACLAM, contact Dr. Martin Morin at morinasc@skip-jack.bluecrab.org.

Johns Hopkins Center for Alternatives to Animal Testing primarily gives grants for replacements, but on at least one oc-

casion with which I am familiar they did fund a refinement project. Remember, it never hurts to ask. Their web site is <http://caat.jhsph.edu>

An interesting refinement project is the development of an Internet training module for animal handling by Ken Boschert, D.V.M., at Washington University. This is currently being funded by the Bosack-Kruger Foundation. Funding for pain and distress, not only for laboratory animals, but for animals having routine surgeries such as dehorning, castration, spay/neuter of companion animals, etc., is just now coming to the forefront and certainly qualifies as refinement. The Tompkins Trust in Boston gives about \$50,000 yearly for humane research in Massachusetts and has, for the past few years, granted \$12,000 annually for a pain and distress project at Tufts University. The Barbour Foundation is funding a similar project for animals at the University of Tennessee.

Establishment of the first center for the management of animal pain at the University of Tennessee, College of Veterinary Medicine (headed by Cornell's well-known expert, anesthesiologist Charles Short, D.V.M.) should help give this important area of animal welfare a big push and a lot more visibility.

Personal rewards

A few organizations offer awards to individuals. Some have not yet been awarded for refinements, but I am told should such a candidate be nominated for the award, they would be considered.

The \$10,000 Geraldine R. Dodge Foundation "Ethics in Action Award" and the Humane Society of the United States "Russell and Burch Award" with a \$5,000 prize are just two.

Awards from WARDS, which stands for "Working for Animals used in Research, Drugs, and Surgery," started in 1996. They specifically recognize individuals and institutions that have excelled in eliminating animal pain and discomfort, both physical and psychological. It is interesting to note their awards to date have gone to individuals. In 1999, the first place award of \$6,000 went to Paul Flecknell of the University of Newcastle, UK, for his work "Refinement of rodent and rabbit anesthesia and analgesia." The second place award of \$2,000 was given to Peggy Danneman of the University of Tennessee for "Assessment of various anesthesia regimens, including profound hypothermia, in neonatal rats." Third place awards of \$1,000 were shared by Cory Brayton of the Hospital for Special Surgery (New York) for "Refinement of drug administration studies of the effects of bisphosphonates in mice with osteogenesis imperfecta" and Stephen Dubin of Drexell University for "Non-invasive measurement of body fat percentage as a refinement alternative."

You can contact WARDS at 8150 Leesburg Pike, Suite 512, Vienna, Virginia 22182-2714, phone (703) 442-4511, fax: (703) 442-4729, e-mail: oawards@erols.com, <http://www.erols.com/oawards>.

Some quick tips from a veteran reader of grant proposals. I feel qualified to say this because for this year's grant cycle, I just finished reading 297 grant applications.

When you write or telephone, first ask for a foundation's guidelines. This way you will learn exactly what they fund. If you have a question regarding the compatibility of your work after you get their criteria, ask the grants' administrator if your program fits. One call can save you hours!

Writing the proposal to a foundation: No matter how complex or technical your project, write a short, one or two paragraph abstract or introduction that can be understood by a reasonably intelligent liberal arts college graduate. Almost all foundations funding your kind of work have scientific advisors, but when the trustees or directors sit down to discuss the merits of grant A over grants B and C, they often refer back to their own notes on the original proposal.

Case in point. Last week we reviewed three grants for genetic research. One dealing with immunogenetics of disease in the horse, one a study of a screening panel for chromosome assignment of genetic traits in dogs, and a third which was so complicated our distinguished scientific advisor was unable to unscramble exactly how or what was to be accomplished. When trustees reviewed these, the president said "I hate the one for traits in dogs" and others were equally luke warm. The researcher never made the point in his very long introduction that the traits he wished to uncover facilitate the breeding of healthy dogs, and those without inherited soundness problems. The president thought the purpose of the research was to find sites for traits such as coat color. End result, the horses got the dollars. I also find grant committee members like pictures, drawings, cartoons, any tool which makes the complex scientific project unique, and memorable when they are reading a lot of applications.

Please remember also that not all foundation trustees are dyed-in-the-wool anti-vivisectionists or opposed to research using animals.

To be applauded, the Humane Society of the United States is currently championing the cause of laboratory animals and their replacement where possible. I would encourage HSUS to target foundation boards throughout the United States to make the folks with the money aware of the need for refinements.

Speaking in marketing terms, the plight of laboratory mice and rats is not such an easy sell to the public as warm, fuzzy kittens and puppies in distress, creatures with which they can easily empathize.

It is a simple fact that research animals which are healthy, physically and mentally, provide researchers with better data. There are valuable research projects and programs using animals which could be happier, less stressed, and less painful for which you need money, but if you never tell the foundation administrators of your need, they will never know. There are many foundations out there with billions of dollars to give away. That is our *raison d'être* and why the Internal Revenue Service treats foundations specially.

Bill Gates is the world's best known billionaire, and his foundation's corpus is growing as his own wealth increases daily. For all we know, Mr. Gates may be interested in biomedical research which uses large animals, or he may be fascinated by nonhuman primates or mice. Funding for refinements could be right up his alley, but if you don't ask, you'll never know!

Follow that money! ■



International News

Guidance Document on the Recognition, Assessment, and Use of Clinical Signs as Humane Endpoints for Experimental Animals Used in Safety Evaluation

Now available from the Organization for Economic Co-operation and Development (OECD)

OECD Environmental Health and Safety Publications
Series on Testing and Assessment No. 19
<http://www.oecd.org/ehs/test/mono19.pdf>

The purpose of this Guidance Document is to apply the principles of the Three Rs to the use of animals in regulatory toxicity tests. The OECD encourages the humane use of animals in regulatory toxicity and safety evaluation studies and fully endorses the principles of the 3Rs, Replacement, Reduction, Refinement, which were defined by Russell and Burch as:

- * Replacement—the substitution for conscious living higher animals of insentient material
- * Reduction—reduction of animals used to obtain information of given amount and precision
- * Refinement—any decrease in the incidence or severity of inhumane procedures to those animals which still have to be used

This document specifically addresses Refinement.

This guidance is based on best current knowledge available from OECD Member Countries' experts, through personal contacts with investigators, peer-reviewed literature, and presentations at meetings and symposia, and is intended to be flexible so that it can change with improved knowledge in the future. It is expected that with increasing knowledge and experience, investigators in animal research will be able to identify more specific, early humane endpoints in the form of clinical signs for impending death or severe pain and distress. This would permit international harmonization of these humane endpoints.

Although the principles of the 3Rs are applicable to all animal species, it is generally accepted that there are differences among species in many clinical signs of pain or distress. Variables due to the species and strain of animal involved, the

type of toxicity study being performed, and the types of materials being tested, are not addressed in detail. Although there are a number of similarities between mammals and other vertebrate species, the differences among the different families do not allow them to be easily addressed in a single document. The general principles contained in this guidance document are specifically designed to be applicable for all mammalian species used in toxicity testing and other experimental studies.

Topics covered include:

- Definitions, explanations, and examples of relevant terminology
- Guiding principles
- Initial considerations
- Recognition and assessment of pain, distress, and suffering as an approach to detecting clinical signs and abnormal conditions
- Making an informed decision to humanely kill animals
- Methods for humane killing
- Guidance on the humane conduct of specific types of toxicity testing
- References
- Summary of clinical signs observed in rats during the validation studies of the acute toxic class method
- Questions to determine whether earliest possible endpoints have been sought
- Clinical signs and conditions indicating the need for closer observation or humane killing
- Clinical signs and conditions of animals requiring action by animal care staff and study directors

This publication is available electronically, at no charge. For the complete text of this and many other Environmental Health and Safety publications, consult OECD's World Wide Web site (<http://www.oecd.org/ehs/>) or contact: OECD Environment Directorate, Environmental Health and Safety Division, 2 rue André-Pascal, 75775 Paris Cedex 16, France, fax: (33-1) 45 24 16 75, e-mail: ehscont@oecd.org. ■

On Line Site Dedicated to Alternatives in Medical Sciences

<http://embryo.ib.amwaw.edu.pl/invitox/invitro/Online5a.htm>

Maintained by Dr. Darius Sladowski at the Department of Transplantology and Central Tissue Bank, Medical University of Warsaw, Poland. This site provides links to databases; organizations and research groups; laboratory supplies; cells and tissues; national centers in Europe; upcoming conferences; scientific journals; and a tour of the in vitro laboratory at the Department of Transplantology and Central Tissue Bank, Medical University of Warsaw, Poland. Its main duties are preparation of biostatic grafts for transplantation and research in this field. ■



Commission proposes banning animal testing for cosmetics in the EU

Date : 2000-04-14

The European Commission has adopted a proposal for a directive which would amend current legislation in the Member States on testing cosmetics on animals [available at http://europa.eu.int/eur-lex/en/com/dat/2000/en_500PC0189.html]. The amendment involves changing the marketing ban of products containing ingredients tested on animals after 1 July 2000 into a full scale ban on animal testing of cosmetic products in the European Union (EU). "This would serve the double objective of ensuring WTO compatibility of the EU scheme and provide a more effective way to protect animal welfare," says the Commission [in a press release dated April 5, 2000 (Reference IP/00/335). The press release is available at <http://europa.eu.int/rapid/start/welcome.htm>.]

"The issue of animal testing for cosmetic purposes is of key importance. On the one hand, animal testing of cosmetics is necessary to ensure that cosmetic products are safe for humans. On the other hand, animal rights groups claim that animals are tortured for the sake of unnecessary human vanity. A way out of this dilemma is the development of 'validated alternative methods to animal testing' which is promoted by the Commission."

According to Commission estimates, 0.3 percent of the animals experimented on in the EU each year are used specifically to test the safety of cosmetics products and their ingredients. Such tests are mainly conducted to ensure products do not cause irritation to the eyes or skin, or long term effects. The animals used for these types of tests are not systematically vivisected. Most tests are done to provide data on products' toxicity - as required under other EU legislation on dangerous substances - or to assess the safety of pharmaceuticals biocides (such as pesticides and herbicides). The Commission claims to have already gone some way to reduce and replace the number of animals used in such tests, but now it wants to take more concrete action. The proposal calls for an immediate and definite testing ban for finished products in the EU and a definite testing ban for cosmetic ingredients 3 years after the implementation of the directive.

However, the "Cosmetics Directive" might affect imported goods. In its current wording, the directive bans the marketing in the EU of cosmetic products containing ingredients tested on animals and therefore affects third country products. "This would appear to raise certain difficulties in relation to the World Trade Organisation (WTO)," says the Commission.

Concerned that this might cause friction with trade partners, the Commission is now proposing modifying the ban to ensure WTO compatibility and to make it "legally and practically enforceable."

To do this, the Commission is considering changing the proposed marketing ban to a ban on testing animals in the EU. As soon as the Directive is formally adopted by the Member States and the European Parliament, there will be an immediate ban on the testing of finished products and a gradual ban will be implemented on the testing of ingredients.

The Commission outlines the proposal's main objectives as follows:

- a permanent and definite ban on the testing of finished cosmetic products on animals in the EU;
- a definite ban on the testing of cosmetic ingredients on animals in the EU 3 years after the date of implementa-

tion of the proposed directive. This date could be postponed for no longer than 2 years in the event of a lack of "validated alternative methods ensuring a high level of protection to consumers." Once cosmetic ingredients have been validated at EU level the proposal calls for mandatory use of alternative methods for testing;

- the EU will also aim to take the lead in international regulatory acceptance of alternative methods, "in particular through bilateral agreements and negotiations at OECD level"; and
- to improve the information provided to the consumer, the Commission proposes to introduce a voluntary labeling system, in consultation with the Member States and in line with WTO rules. The labels would clearly state that animal testing has not been performed on a cosmetic product.

"This is a clear signal to industry," says a Commission official. "We are working very hard with the industry and we will continue our dialogue."

Data Source Provider : European Commission, press and information service.

Document Reference: Based on a press release IP/IP/00/335. ■

Draft CCAC Guidelines on Antibody Production

The draft Canadian Council on Animal Care (CCAC) guidelines on antibody production are now available for review by CCAC constituents and other interested parties.

Please forward your comments, suggested amendments or corrections to Gilly Griffin, Ph.D., Director of Guidelines Development, ggriffin@bart.ccac.ca, by September 30, 2000.

The draft CCAC guidelines on antibody production have been developed by the CCAC subcommittee on immunological procedures: Drs. Albert Clark, Pam Ohashi, Michael Schunk, Fred Hart, Dean Befus, and Andy Fletch. The CCAC is grateful to these individuals for their valuable contribution during the drafting of these guidelines. In addition, an early draft of the guidelines was reviewed by a group of 16 experts, both from Canada and the United States, including representatives from the Canadian Society for Immunology. The important contribution of these experts is similarly recognized.

During October 2000, the responses received from this widespread review of the guidelines on antibody production will be evaluated by the subcommittee on immunological procedures and used to draft the final version of the guidelines. The CCAC guidelines on antibody production are scheduled for publication later in the fall of 2000, following approval by the CCAC Council. The guidelines will supercede the CCAC policy statement on acceptable immunological procedures.

For more information on these guidelines, please contact: Canadian Council on Animal Care, 315-350 Albert Street, Ottawa ON Canada K1R 1B1, phone: (613) 238-4031, ext. 25, fax: (613) 238-2837, e-mail: ggriffin@bart.ccac.ca, <http://www.ccac.ca> ■



International News

Zentralstelle zur Erfassung und Bewertung von Ersatz- und Ergänzungsmethoden zum Tierversuch (ZEBET) database on alternatives to animal experiments available online via DIMDI free of charge

In February 2000, Germany's Federal Institute for Consumer Health Protection and Veterinary Medicine (BGVV-Bundesinstitut für gesundheitlichen Verbraucherschutz und Veterinärmedizin) put the ZEBET database on alternative methods to animal experiments on the Internet in English via DIMDI, the German Institute for Medical Documentation and Information (<http://www.dimdi.de>). ZEBET's database key is ZT00. The access is freely licensed. For searching, the tools Free grips-WebSearch or grips-commands have to be used. The search tools for the ZEBET database are explained in the ZEBET Database Memocard in DIMDI. DIMDI's complete service is available to visitors of the ZEBET database.

In 1989, ZEBET (Center for Documentation and Evaluation of Alternative Methods to Animal Experiments) was established at the Federal Institute for Consumer Health Protection and Veterinary Medicine (BGVV). ZEBET's objectives are to document and validate alternative methods and also to promote their acceptance by both scientists and regulators. It is ZEBET's prime task to reduce the number of animals used for regulatory purposes. Therefore, ZEBET is providing access to its database to scientists in industry, at research institutions, and in the regulatory environment. In addition, ZEBET is conducting in-house research and provides funds to develop and validate alternative methods.

According to the German animal protection law and EU Council Directive 86/609/EEC on the protection of animals used for experimental and other scientific purposes, scientists have to prove that the goal of a study cannot be achieved without using experimental animals. Thus, it is the main objective of the ZEBET database to provide information to scientists searching for alternatives to comply with EU Directive 86/609/EEC.

The ZEBET database contains documents on alternatives to testing in animals, which have been carefully evaluated by ZEBET's staff and which meet at least one of the following criteria:

- Refinement of an experiment by minimizing pain and suffering of animal
- Reduction of the number of animals used
- Replacement of an animal experiment by a nonanimal method

These criteria take into account the internationally accepted "3Rs"-concept established by Bill Russell and Rex Burch in 1959 in their book *The Principles of Humane Experimental Techniques*. Each document of the ZEBET database contains the title of a method, keywords, assessment, summary, and bibliographic references. To date, 110 alternative methods have been finalized by ZEBET; 35 of them are currently available online on the Internet via DIMDI. ZEBET is responsible for updating the documents in the ZEBET database and for providing new ones.

For more information, contact Dr. Barbara Grune, BGVV, ZEBET, phone: +49-(0)1888 412 2271, e-mail: grune.zebet@bgvv.de. ■

On-Line Version of the ERGATT FRAME ECVAM Data Bank of In Vitro Techniques in Toxicology (INVITTOX)

<http://www.invittox.com/>

Prepared in co-operation with ERGATT (European Research Group for Alternatives in Toxicity Testing), FRAME (Fund for the Replacement of Animals in Medical Experiments (Nottingham UK) and ECVAM (European Center for the Validation of Alternative Methods (JRC Ispra Italy) by the Medical University of Warsaw.

The aim of INVITTOX protocols is to present precise and up-to-date technical information of the performance of the in vitro techniques currently in use and under development, their applications, advantages, and drawbacks. The information is obtained directly from those scientists already employing such methods. Each protocol includes a detailed methodology sufficient to enable another researcher to carry out a procedure; experimental data, where available; the rationale for choice of technique and endpoint; and critical assessment comments about the accuracy of the system, its sensitivity, ease of implementation, shortcomings, etc. It is envisaged that making all this information available in one document will help scientists to select the systems most appropriate to their needs. Where possible, named contacts are given, to facilitate communication with a scientist experienced in use of the test system or method described. The protocols are produced by INVITTOX staff from pre-prints, reprints, and/or SOPs sent by scientists willing to act as information donors. All relevant information is included in a first draft of the protocol that is sent to the donor together with a list of questions relating to any discrepancies that have been noted and requests for more detailed information on aspects of the procedure. The donor is also asked to comment on and add to our assessment of the reason for choosing the method, how it compares with other techniques, its advantages, disadvantages, and any specialized skill or equipment requirements. All answers and comments are incorporated into a further draft, and the process continues until both sides are satisfied with the document.

Note: An information donor is always someone using or developing the method, but is not necessarily its originator. Some donors choose not to appear as the contact name on the protocol. Where a contact name other than INVITTOX appears, this will be the person who gave us the information. Originators and others who contributed to development of a method are credited in the bibliographic reference within each protocol. We invite all who use this service to consider the possibility of collaborating with us in the production of further protocols. All protocols are available free of charge, on request, from INVITTOX. ■

Protect Your Animals Against West Nile Virus

The U.S. Department of Agriculture is recommending that animal owners take several precautions to protect their animals from West Nile virus.

"Given that mosquitoes were associated with the 1999 outbreak, the key to preventing or controlling future outbreaks of West Nile virus among horses, livestock, or poultry is to prevent animals from being exposed to mosquitoes," said Michael V. Dunn, under secretary for USDA's marketing and regulatory programs.

West Nile is a vector-borne virus causing encephalitis, an inflammation of the brain. It was first recognized in the Western Hemisphere in 1999.

The following recommendations are based on current knowledge about WNV and the 1999 U.S. outbreak.

Reduce Mosquito Breeding Sites

The most important step any property owner can take to control mosquito populations is to remove all potential sources of stagnant water where mosquitoes might breed. Precautionary steps include:

- Dispose of any water-holding containers, including discarded tires;
- Drill holes in the bottom of containers that are left outdoors;
- Clean clogged roof gutters annually;
- Turn over plastic wading pools or wheelbarrows when not in use and do not allow water to stagnate in bird baths;
- Ventilate ornamental pools or stock them with fish;
- Clean and chlorinate swimming pools that are not in use; and
- Thoroughly clean livestock-watering troughs monthly.

Insect Repellents

Use of insect repellents may be of some value in decreasing exposure of horses to adult mosquitoes; however, repellents alone should not be relied upon to prevent mosquito exposure.

Screened Housing

Housing animals in structures with well-maintained insect screening can reduce exposure to adult mosquitoes. Be sure to eliminate mosquitoes from inside the structure first through the use of mosquito adulticides and fans.

Outdoor Exposure

The mosquitoes responsible for the transmission of WNV to horses and other mammalian species generally feed at dawn, dusk, and during the night. USDA recommends caution when exposing animals to areas inhabited by mosquitoes during these times.

USDA's Actions To Protect Agriculture

USDA's Animal and Plant Health Inspection Service's veterinary services program has developed a diagnostic test for West Nile virus and is on the lookout for virus activity along the Atlantic seaboard. The program investigates any horses showing clinical signs of encephalitis, in which other common causes such as rabies can be ruled out. APHIS' Wildlife Ser-

vices program carries out wild bird specimen collection, initially focusing on East Coast States from Connecticut to Florida, for West Nile virus testing.

USDA's Agricultural Research Service and National Veterinary Services Laboratories have conducted inoculation studies with turkeys, chickens and horses.

For more information on West Nile virus, visit the APHIS website at <http://www.aphis.usda.gov> and click on the "West Nile Virus" link in the hot issues section. ■

USDA EXTENDS COMMENT PERIOD FOR PAIN AND DISTRESS SYSTEM AND DEFINITION

WASHINGTON, August 18, 2000—The U.S. Department of Agriculture is extending the comment period on its consideration to replace or modify the system for classifying animal pain and distress for animals used for research, tests, experiments, or teaching. USDA is also considering adding a definition for the word "distress" in its Animal Welfare Act regulations.

"The public has requested more time to comment on these important issues, and we want to give interested parties sufficient time to respond," said W. Ron DeHaven, deputy administrator for animal care with the Animal and Plant Health Inspection Service, a part of USDA's marketing and regulatory programs mission area. "Public comments are very important to our decisions about changes to AWA regulations."

With the 60-day extension, consideration will be given to comments received on or before Nov. 7. To submit comments, send an original and three copies to Docket No. 00-005-1, Regulatory Analysis and Development, PPD, APHIS, Suite 3C03, 4700 River Road, Unit 118, Riverdale, Md. 20737-1238.

Comments regarding this issue are available to the public and may be viewed at USDA, Room 1141, South Building, 14th Street and Independence Avenue, S.W., Washington, D.C. between 8 a.m. and 4:30 p.m., Monday through Friday, except holidays. Persons wishing to review comments are requested to call ahead on (202) 690-2817 to facilitate entry into the reading room.

The notice of the extension of the comment period is published in the Aug. 21 Federal Register. APHIS documents published in the Federal Register, and related information, including the names of organizations and individuals who have commented on APHIS dockets, are available on the Internet at <http://www.aphis.usda.gov/ppd/rad/webrepor.html>.

For additional information, contact: Jodie Kulpa, staff veterinarian, AC, APHIS, 4700 River Road, Unit 84, Riverdale, Md. 20737, (301) 734-7833. ■

[Federal Register: July 10, 2000
(Volume 65, Number 132)] [Proposed Rules]
[Page 42304-42305]
DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service
9 CFR Parts 1 and 2
[Docket No. 00-005-1]

Animal Welfare; Definitions for and Reporting of Pain and Distress

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Request for comments.

SUMMARY: We are considering several changes to the Animal Welfare regulations to promote the humane treatment of live animals used in research, testing, and teaching and to improve the quality of information we report to Congress concerning animal pain and distress. Specifically, we are considering adding a definition for the term "distress." Although this term is used throughout the Animal Welfare regulations, it is not defined. The addition of such a definition would clarify what we consider to be "distress" and could help assist research facilities to recognize and minimize distress in animals in accordance with the Animal Welfare Act (AWA).

We are also considering replacing or modifying the system we use to classify animal pain and distress. Professional standards regarding the recognition and relief of animal pain and distress have changed significantly since we established our classification system. Some biomedical research professionals and animal welfare advocates believe our classification system is outdated and inadequate. A different categorization system could produce data that more accurately depict the nature of animal pain or distress and provide a better tool to measure efforts made to minimize animal pain and distress at research facilities.

We are soliciting public comments on the changes we are considering. We are also interested in obtaining information on specific pain and distress classification systems other than the one we now use.

DATES: We invite you to comment on this docket. We will consider all comments that we receive by September 8, 2000. [Editor's Note: see sidebar on page 17 for extension of time for comments.]

ADDRESSES: Please send your comment and three copies to: Docket No. 00-005-1, Regulatory Analysis and Development, PPD, APHIS, Suite 3C03, 4700 River Road, Unit 118, Riverdale, MD 20737-1238.

Please state that your comment refers to Docket No. 00-005-1. You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue, SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690-2817 before coming.

APHIS documents published in the Federal Register, and related information, including the names of organizations and

individuals who have commented on APHIS dockets, are available on the Internet at
<http://www.aphis.usda.gov/ppd/rad/webrepor.html>.

FOR FURTHER INFORMATION CONTACT: Dr. Jodie Kulpa, Staff Veterinarian, AC, APHIS, 4700 River Road Unit 84, Riverdale, MD 20737-1234; (301) 734-7833.

SUPPLEMENTARY INFORMATION:

Background

Under the Animal Welfare Act (AWA) (7 U.S.C. 2131 et seq.), the Secretary of Agriculture is authorized to promulgate standards and other requirements regarding the humane handling, care, treatment, and transportation of certain animals by dealers, research facilities, exhibitors, carriers and intermediate handlers. The Secretary has delegated responsibility for administering the AWA to the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA). Regulations established under the AWA are contained in the Code of

Federal Regulations (CFR) in title 9, parts 1, 2, and 3 (referred to below as the regulations). Part 1 contains definitions for terms used in parts 2 and 3. Part 2 contains general requirements for regulated parties. Part 3 contains specific requirements for the care and handling of certain animals.

We are soliciting comments on an approach, discussed below, for amending the regulations by defining "distress" in part 1 and by modifying or replacing the animal pain and distress classification system in part 2.

Definition for Distress

In the regulations, we define a "painful procedure" as any procedure that would reasonably be expected to cause more than slight or momentary pain or distress in a human being to which that procedure was applied. Although we use the term "distress" in this definition and elsewhere in

the regulations, there is no definition for distress in the regulations. We are considering adding such a definition because of requests from the biomedical research community and animal advocacy groups. These parties have asked USDA to provide guidance on what is considered to be distress in a procedure involving research animals in order to improve recognition of animal distress, to classify and report it more accurately, and to create a heightened awareness of the regulations' requirement to minimize animal distress and pain.

Pain and Distress Classification System

Section 13(a)(7)(B) of the AWA requires research facilities to annually provide "information on procedures likely to produce pain or distress in any animal." In accordance with the AWA, the regulations at Sec. 2.36 require facilities that use or intend to use live animals for research, tests, experiments, or teaching to submit an annual report to the Animal Care Regional Director for the State where the facility is located. Among other things, the report must state the common names and the numbers of animals upon which teaching, experiments, research, surgery, or tests were conducted involving: (1) No pain, distress, or use of pain-relieving drugs; (2) accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used; and (3) ac-

companying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.

To provide these data, each research facility must assess the potential for animal pain or distress associated with the proposed procedures. This assessment is performed prospectively (i.e., before the procedure) and typically forms the basis for the pain and distress report provided by the facility to USDA. The assessment, therefore, is an estimate based on professional judgment, knowledge, and experience, and the resulting report may or may not accurately reflect the conditions the animals actually experience. The research facility can, as an option, retrospectively (i.e., during or after the procedure) assess the animal pain and distress observed and report these results. We do not know how often facilities perform retrospective reporting.

There is no provision in the current classification system to address some areas identified by the research community and animal advocacy groups. For example, the current system does not include a means to report:

- An assessment of the relative intensity or duration of pain or distress either observed in the animal or anticipated to be experienced by the animal;
- An assessment of the anticipated or observed efficacy of the pain- or distress-relieving agent provided to animals undergoing a painful or distressful procedure;
- A distinction between procedures causing animal pain and procedures causing animal distress;
- Animals that were prevented from experiencing pain or distress by the appropriate and effective use of pain- or distress-relieving methods or procedures (e.g., well-anesthetized animals that undergo terminal surgery);
- Animals that did not experience pain or distress due to the appropriate and effective use of pain- or distress-relieving methods or procedures other than anesthetic, analgesic, or tranquilizing agents;
- Animals that experience unrelieved pain or distress for a reason other than that the use of anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, experiments, surgery, or tests; or
- Animals that experience pain or distress without having been used in a procedure (e.g., illness in animals that have been genetically altered to develop disease).

We are aware of several alternative pain and distress classification systems. For example, the system adopted by the Canadian Council on Animal Care, "Categories of Invasiveness in Animal Experiments," may be viewed on the Internet at <http://www.ccac.ca/english/categ.htm>

The system proposed by the Humane Society of the United States may be viewed on the Internet at http://hsus.org/programs/research/usda_proposed_scale.html. \1\

Other classification systems, varying greatly in complexity, are in use in other countries, such as Switzerland and Sweden.

\1\ If you do not have access to the Internet, you may obtain a copy of the system adopted by Canadian Council on Animal Care or the system proposed by the Humane Society of the United States by contacting the person listed under FOR FURTHER INFORMATION CONTACT at the beginning of this document.

Modifying the current USDA system, in lieu of replacing it, could also be an option. This could involve replacing or redefining the existing categories to:

- Separately report pain and distress;
- Quantify pain and distress intensity and duration;
- Separately classify anesthetized or otherwise treated animals undergoing potentially painful procedures but not experiencing pain or distress; or
- Modify the system in other ways.

We invite your comments on adding a definition for distress to the regulations and replacing or modifying our animal pain and distress classification system. We are particularly interested in soliciting comments addressing the following questions:

1. Would adding a definition for distress to the regulations help institutions using animals for research, testing, or teaching better recognize, minimize, and report animal distress?
2. If a definition for distress is added to the regulations, what key elements should be included in that definition?
3. What are the benefits and limitations of our pain and distress classification system?
4. Should our animal pain and distress classification system be modified or replaced? If so, what specific modifications or alternate classification systems should we consider?
5. Should animal pain and distress be prospectively or retrospectively reported?

Written comments should be submitted within the 60-day comment period specified in this document (see DATES and ADDRESSES).

Executive Order 12866

This action has been reviewed under Executive Order 12866. The action has been determined to be not significant for the purposes of Executive Order 12866 and, therefore, has not been reviewed by the Office of Management and Budget.

Authority: 7 U.S.C. 2131-2159; 7 CFR 2.22, 2.80, and 371.2(g). ■

1999 Animal Welfare Report Available

Each year, the Secretary of Agriculture reports on administration and enforcement activities under the Animal Welfare Act (AWA) (7 U.S.C. 2131 et seq.) as required by Section 25 of the AWA. The present report covers fiscal year (FY) 1999, from October 1, 1998, through September 30, 1999. The report is available at <http://www.aphis.usda.gov/reac/awrep99.pdf>

USDA Employee Survey on the Effectiveness of IACUC Regulations

<http://www.aphis.usda.gov/ac/iacucaugust.pdf>

Executive Summary

USDA APHIS Animal Care conducted a brief mail survey of 40 of its field employees who are Veterinary Medical Officers (VMOs) and 9 of their supervisors to assess their opinions about the effectiveness of USDA's current approach to ensuring humane care and use of animals at research facilities through the mechanism of Institutional Animal Care and Use Committees (IACUCs) and to collect ideas about how to improve it. All VMOs and supervisors responded to the survey. Collectively, the VMOs inspect more than 1200 facilities. Seventy percent of the VMOs have 8 or more years experience inspecting research facilities and have had an opportunity to observe the effect of the IACUC regulations since their inception.

Ninety four percent of the VMOs who answered felt that the overall effect of the IACUC regulations has been to improve the welfare of research animals. Those VMOs who have the highest number of research facilities (35 or more) and spend 60% or more of their time inspecting them feel the strongest about it—that the welfare of research animals has been "Greatly Improved" by the IACUC regulations. The VMOs rate the regulations, the functioning of IACUCs, and Animal Care's enforcement of the regulations Medium to Medium High. The VMOs also rated the IACUCs' effectiveness on a range of specific functions. The pattern across these functions was relatively consistent; IACUCs seem to be doing well at functions related to setting up the administrative structure and developing the process, but not as well at monitoring and follow through.

These findings support the conclusion that the IACUC regulations are generally effective, and that great strides have been made in improving humane care and use of animals at research facilities since the regulations were adopted, but the task is not finished yet. APHIS should not spend resources on a major overhaul of the IACUC regulations in general, but should work toward refining the system that has been established. The industry response to the system is evolving and research science is evolving. APHIS needs to stay current with these changes, needs to be consistent in what we require. The regulations were designed to allow the government to keep up as this process unfolds.

Animal Care VMOs report that some of the problem areas that need to be refined are: the search for alternatives, review of painful procedures, and monitoring the investigators' use of animals to ensure compliance with approved protocols and standard operating procedures. An estimated 600 to 800 facilities have had trouble with the search for alternatives, 450 to 600 with review of painful procedures, and 350 to 400 with monitoring for compliance. The high level of problems reported by VMOs supports the need for a review of Policy 12, "Search for alternatives." APHIS should, in conjunction with AWIC,

OPRR, and industry, develop a way to appropriately encourage searching for alternatives to painful procedures.

The VMOs answering the survey identified a great number of innovations that various facilities have made that may have merit for distribution. Most of the ideas they identified for improving the regulations seem to involve clarifying the roles of the Institutional Official and the IACUC members and strengthening the IACUCs' authority. A number of VMOs advocate issuing a policy, guideline or educational materials that would close the gaps and refine the system. Animal Care needs to provide clear guidance to industry and the VMOs on what constitutes a painful or distressful procedure for AWA purposes, expectations to minimize pain and distress, and how to accurately report on them. A large number of VMOs advocated attending IACUC meetings in order to educate the members on regulation requirements and facilitate communication with them. A large number also recommended that they should be allowed to take the time to be more thorough, review records in more detail, comprehensively evaluate sensitive protocols involving surgery, pain and distress, talk to Principal Investigators, and do occasional audits of Category D and E procedures. Downloadable forms and checklists they could share with facility personnel would be a help to them.

A list of training ideas for both IACUCs and VMOs is included in the report. Some of their needs are the same and could be met in joint sessions offered through the Animal Welfare Information Center and similar venues. Many of the VMOs' other training needs could be met by allowing them to join their colleagues on research facility inspections, observe types of research being conducted, and discuss ways that their colleagues resolved certain problems. Policy clarifications and guidelines, when completed, would require a more formal approach than participating with colleagues on joint inspections. Depending upon how extensive they are, they would probably entail developing training sessions focusing specifically on IACUC compliance. ■

APHIS Forms for Animal Care - for Public Use

Available at <http://www.aphis.usda.gov/ac/forms/forms>

Some of the forms require multiple copies for record keeping requirements. Please make one or more copies of your completed form for this purpose.

- 7002 -- Program of Veterinary Care
- 7003 -- Renewal of License
- 7003a -- New License Application
- 7005 -- Record of Acquisition of Dogs and Cats on Hand
- 7006 -- Record of Disposition of Dogs and Cats
- 7006a -- Continuation Sheet for 7006
- 7019 -- Records of Animals on Hand
- 7020 -- Record of Acquisition, Disposition, or Transport of Animals Other than Dogs or Cats.
- 7020a -- Continuation Sheet to 7020

tenced to death), shall apply to sentencing for a violation of section 43 of title 18, United States Code, as amended by this Act to include the death penalty as a possible punishment.

- **H.R.1791 To amend title 18, United States Code, to provide penalties for harming animals used in Federal law enforcement.**

Introduced May 13, 1999, by Jerry Weller (R-Illinois) and signed by President Clinton on August 2, 2000, as Public Law No: 106-254. This Act may be cited as the "Federal Law Enforcement Animal Protection Act of 2000."

SEC. 2. HARMING ANIMALS USED IN LAW ENFORCEMENT.

(a) **IN GENERAL-** Chapter 65 of title 18, United States Code, is amended by adding at the end the following:

Sec. 1368. Harming animals used in law enforcement

(a) Whoever willfully and maliciously harms any police animal, or attempts or conspires to do so, shall be fined under this title and imprisoned not more than 1 year. If the offense permanently disables or disfigures the animal, or causes serious bodily injury or the death of the animal, the maximum term of imprisonment shall be 10 years.

(b) In this section, the term 'police animal' means a dog or horse employed by a Federal agency (whether in the executive, legislative, or judicial branch) for the principal purpose of aiding in the detection of criminal activity, enforcement of laws, or apprehension of criminal offenders.

- **H. R. 4320 To assist in the conservation of great apes by supporting and providing financial resources for the conservation programs of countries within the range of great apes and projects of persons with demonstrated expertise in the conservation of great apes.**

Introduced April 13, 2000, by George Miller (D-California) and referred to the Committee on Resources. This bill was passed by the House as amended on July 25, 2000, and sent to the Senate on July 26. This Act may be cited as the "Great Ape Conservation Act of 2000."

SEC. 2. FINDINGS AND PURPOSES.

(a) **FINDINGS-** Congress finds that—(1) great ape populations have declined to the point that the long-term survival of the species in the wild is in serious jeopardy; (2) the chimpanzee, gorilla, bonobo, and orangutan are listed as endangered species under section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) and under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (27 UST 1087; TIAS 8249); (3) because the challenges facing the conservation of great apes are so immense, the resources available to date have not been sufficient to cope with the continued loss of habitat due to human encroachment and logging and the consequent diminution of great ape populations; (4) because great apes are flagship species for the conservation of the tropical forest habitats in which they are found, conservation of great apes provides benefits to numerous other species of wildlife, including many

other endangered species; (5) among the threats to great apes, in addition to habitat loss, are population fragmentation, hunting for the bushmeat trade, and live capture; (6) great apes are important components of the ecosystems they inhabit, and studies of their wild populations have provided important biological insights; and (7) the reduction, removal, or other effective addressing of the threats to the long-term viability of populations of great apes in the wild will require the joint commitment and effort of countries that have within their boundaries any part of the range of great apes, the United States and other countries, and the private sector.

(b) **PURPOSES-** The purposes of this Act are—(1) to perpetuate viable populations of great apes in the wild; and (2) to assist in the conservation and protection of great apes by supporting conservation programs of countries in which populations of great apes are located and by supporting the CITES Secretariat.

- **H. R. 4415 To amend the Animal Welfare Act to require humane living conditions for calves raised for the production of veal.**

Introduced May 10, 2000, by Gary Ackerman (D-New York) and referred to the Committee on Agriculture.

SEC. 29. PROTECTION OF VEAL CALVES.

(a) **HUMANE LIVING CONDITIONS REQUIRED-** Beginning one year after the date of the enactment of this section, no person shall raise a calf for the production of veal unless the person complies with the following requirements: (1) The calf must be free to turn around without difficulty, lie with its legs outstretched, and groom itself, without any impediment such as too small an enclosure, chaining, or tethering. (2) The calf must be fed a daily diet containing sufficient iron and, if the calf is more than 14 days old, sufficient digestible fiber to prevent anemia and to sustain full health.

(b) **PENALTIES-** The remedies and procedures provided in subsections (b), (c), and (d) of section 19 shall apply with respect to a violation of subsection (a).

(c) **INVESTIGATIONS AND INSPECTIONS-** For purposes of enforcement of this section, the Secretary may make such investigations or inspections as the Secretary considers necessary of any facility where calves are kept for the production of veal. Section 16 shall apply with respect to investigations and inspections conducted under this section.

- **H. R. 4496 To provide for the reintroduction of the Eastern Timber Wolf in the Catskill Mountains, New York, and to authorize the Secretary of the Interior to acquire lands through the Bureau of Land Management to facilitate that reintroduction.**

Introduced May 18, 2000, by Michael Simpson (R-Idaho) and referred to the Committee on Resources. On June 5, 2000, it was referred to the Subcommittee on National Parks and Public Lands and executive comment was requested from Interior. This Act may be cited as the "Protecting America's Wolves Act."

SEC. 2. FINDINGS AND PURPOSE.

The Congress finds the following: (1) Throughout history, wolves have been misunderstood and feared. Wolves have been subjected to widespread persecution and targeted by large scale predator eradication programs sponsored by private, State, and Federal entities. The Endangered Species Act of 1973 finally protected wolves as endangered species, but by that time wolves had been almost completely exterminated from the lower 48 States, except for a few hundred wolves that inhabited extreme northeastern Minnesota. (2) The subspecies commonly known as the Eastern Timber Wolf (*Canis lupus lycaon*) once had an extensive range covering most of the Eastern United States, including the Catskill Mountains of New York. (3) Reintroduction of the Eastern Timber Wolf into the State of New York would serve the public interest, by—(A) helping to ensure the survival of that subspecies; (B) enhancing the biological diversity of the ecosystems of the State of New York and bringing them into a more natural balance; (C) beginning to redress some of the mistakes of the past, such as the Government-sponsored extermination of the Eastern Timber Wolf; and (D) enhancing our understanding of wolves and of the environment. (4) The public debate surrounding wolf reintroduction in the Northeastern United States would foster a deeper understanding within the general public about the complex interactions among species in their natural environments.

SEC. 3. EASTERN TIMBER WOLF REINTRODUCTION.

(a) IN GENERAL- Not later than 2 years after the date of the enactment of this Act, the Secretary of the Interior shall prepare and publish a recovery plan for the Eastern Timber Wolf in the Northeastern United States under section 4(f) of the Endangered Species Act of 1973 (16 U.S.C. 1533(f)), including a plan for releasing Eastern Timber Wolves in the Catskill Mountain area of New York under section 10(j) of that Act (16 U.S.C. 1539(j)).

(b) PLAN CONTENTS- The Plan shall include the following: (1) Goals for the biological recovery of the Eastern Timber Wolf, including wolf population goals that must be achieved as a condition for removing that subspecies from lists under section 4(c) of the Endangered Species Act of 1973 (16 U.S.C. 1533(c)). (2) A process and method for obtaining Eastern Timber Wolves from Canada for release under the plan. (3) An outline of how releases under the Plan will proceed, including proposals for cooperative agreements that may be pursued with State and local government agencies to facilitate those releases. (4) A determination of the number of Eastern Timber Wolves that should be released under the Plan to ensure a self-sustaining population of that species in the Catskill Mountain area of New York. (5) A process for compensating New York residents for depredation of livestock by Eastern Timber Wolves, including—(A) an estimate of the number and value of livestock in New York expected to be lost to depredation by that species; (B) criteria for determining in individual cases whether livestock depredation by that species has actually occurred; (C) procedures for providing compensation; (D) establishment of a separate account for the receipt and disbursement of donations of money for use to pay compensation, that shall be known as the 'Protecting Eastern Timber Wolf Restoration Mitigation Fund'; and (E) an estimate of the amount of money that would be needed in that account to ensure in perpetuity the availability of amounts for paying such compensation.

(6) A study of—(A) the feasibility of releasing Eastern Timber Wolves in other parts of New York; and (B) the feasibility of reducing road densities in certain areas of New York to provide for wolf dispersal corridors.

(c) ACCEPTANCE AND USE OF DONATIONS-(1) IN GENERAL- The Secretary may accept and use donations of funds for compensating New York residents for depredation of livestock by Eastern Timber Wolves under the Plan. (2) DEPOSIT INTO PET WOLF FUND- Amounts received as donations under this subsection—(A) shall be deposited into the PET Wolf Fund; and (B) shall be available, subject to appropriations, for paying compensation in accordance with the Plan.

SEC. 4. EASTERN TIMBER WOLF RELEASES.

(a) IN GENERAL- The Secretary shall, in accordance with the Plan, begin releasing Eastern Timber Wolves on land in the Catskill Mountain area of New York acquired under section 5 by the latest of—(1) the date that is 3 years after the date of the enactment of this Act; (2) the date on which the Secretary has obtained Eastern Timber Wolves for release; or (3) the date on which the Secretary has obtained land under section 5 for that release.

(b) ACQUISITION OF ANIMALS FOR RELEASE- The Secretary shall seek to acquire Eastern Timber Wolves for release under the Plan by not later than the date referred to in subsection (a)(1).

(c) STATUS OF RELEASED WOLVES- Section 10(j)(2)(C) of the Endangered Species Act of 1973 (16 U.S.C. 1539(j)(2)(C)) shall not apply to any population of Eastern Timber Wolves released under this section.

SEC. 5. LAND ACQUISITION.

(a) IN GENERAL- Subject to the availability of appropriations, the Secretary, through the Bureau of Land Management, may acquire land and interests in land within the Catskill Mountain area of New York for use as sites for releases of Eastern Timber Wolves under this Act.

(b) MANAGEMENT- Lands and interests acquired under this section shall be under the administrative jurisdiction of the Bureau of Land Management.

SEC. 6. DESIGNATION OF CRITICAL HABITAT.

Not later than 6 months after the date of the first release of Eastern Timber Wolves under this Act, the Secretary shall designate areas in New York that as critical habitat of the Eastern Timber Wolf for purposes of the Endangered Species Act of 1973.

- **H.R.4801 To consolidate and revise the authority of the Secretary of Agriculture relating to protection of animal health.**

Introduced June 29, 2000, by Collin Peterson (D-Minnesota) and referred to the Committee on Agriculture, and in addition to the Committee on the Judiciary. This act may be cited as the "Animal Health Protection Act."

SEC. 6. INTERSTATE MOVEMENT.

(a) IN GENERAL- The Secretary may prohibit or restrict the—(1) movement in interstate commerce of any animal, article, or means of conveyance if the Secretary

determines that the prohibition or restriction is necessary to prevent the possibility of interstate introduction or dissemination of any disease or pest of livestock; and (2) use of any means of conveyance or facility in connection with the movement in interstate commerce of any animal or article if the Secretary determines that the prohibition or restriction is necessary to prevent the possibility of interstate introduction or dissemination of any disease or pest of livestock.

(b) MOVEMENT OF LIVESTOCK-(1) IN GENERAL- No person shall confine alpaca, bison, buffalo, camel, cattle, deer, donkey, elk, goat, horse, llama, mule, reindeer, sheep, swine, or such other animals that the Secretary may designate in regulation, except embryos of such animals and equines for slaughter, moved in interstate commerce in any means of conveyance for a period longer than twenty-eight consecutive hours without unloading such animals in a humane manner into properly equipped pens for rest, water, and feeding, for a period of at least five consecutive hours, unless prevented by storm or by other accidental or unavoidable causes which cannot be anticipated or avoided by the exercise of due diligence and foresight. (2) TIME OF CONFINEMENT- When calculating the time of confinement, the time consumed in loading and unloading shall not be considered, but the time during which such animals have been confined on any connecting means of conveyance without unloading in accordance with paragraph (1) shall be included. (3) RESTING AND FEEDING-(A) IN GENERAL- Such animals unloaded under this subsection shall be properly rested, fed, and watered either by the owner or shipper, or in the case of a default in so doing, then by the owner or operator of the means of conveyance transporting such animals, at the reasonable expense of the owner or shipper of such animals.

(B) LIENS- The owner or operator of the means of conveyance transporting such animals shall in such case have a lien upon such animals for food, water, care, and custody furnished, collectible at destination in the same manner as the transportation charges are collected, and shall not be liable for any detention when the detention is of reasonable duration to enable compliance with this subsection.

(C) OWNER OR SHIPPER PROVIDING FOOD OR WATER- Nothing in this subsection shall be construed to prevent the owner or shipper from furnishing food and water, if the owner or shipper so desires.

(4) APPLICATION OF REQUIREMENT- The requirements of this subsection do not apply if such animals are carried in any means of conveyance in which proper food, water, space, and opportunity to rest have been provided, as determined by the Secretary.

- **H. R. 4819 To amend the Wildlife Services Program of the Department of Agriculture to emphasize the use of nonlethal methods of predator control for livestock protection and to target assistance under the program to operators of small farms and ranches through grants, training, and research regarding the use of nonlethal methods to predator control.**

Introduced July 10, 2000, by Tom Udall (D-New Mexico) and referred to the Committee on Agriculture.

Section 2 of the Act of March 2, 1931 (7 U.S.C. 426a), is amended to read as follows:

SEC. 2. ASSISTANCE FOR SMALL FARM AND RANCH OPERATORS TO USE NONLETHAL MEANS OF PREDATOR CONTROL FOR LIVESTOCK PROTECTION.

(a) DEFINITIONS- In this section: (1) LETHAL PREDATOR CONTROL- The term 'lethal predator control' means a lethal method to control the population of a wild animal that preys on domestic livestock or otherwise interferes with livestock operations, including such methods as aerial gunning, shooting, denning, leghold trapping, conibear trapping, neck and body snaring, and poisoning. (2) NONLETHAL PREDATOR CONTROL- The term 'nonlethal predator control' means a method to prevent, or reduce the likelihood of, a wild animal preying on domestic livestock or otherwise interfering with livestock operations that does not involve the destruction of the animal, including such methods as the use of livestock herders, dogs, burros, or llamas to guard livestock, night penning of livestock, and improved fencing. (3) SECRETARY- The term 'Secretary' means the Secretary of Agriculture, acting through the Animal and Plant Health Inspection Service of the Department of Agriculture. (4) SMALL RANCH OPERATION- The term 'small ranch operation' means a farm or ranch that generates not more than \$250,000 in gross revenues annually, as determined by the Secretary. (5) WILDLIFE SERVICES PROGRAM- The term 'Wildlife Services Program' means the activities authorized by the first section of this Act.

(b) ASSISTANCE RESTRICTED TO SMALL RANCH OPERATIONS- In carrying out Wildlife Services Program operations designed to protect livestock and livestock operations from wild animals injurious to animal husbandry, the Secretary shall restrict those operations to small ranch operations that the Secretary determines—(1) involve the raising of the types of livestock most at risk to damage from wild animals; and (2) are located in those areas where the need for predator control is greatest, rather than those areas where predator control has traditionally occurred.

(c) EMPHASIS ON NONLETHAL PREDATOR CONTROL- The Secretary shall emphasize the use of nonlethal predator control methods, rather than lethal predator control methods, as the preferred way to protect livestock and livestock operations under the Wildlife Services Program.

(d) GRANTS TO IMPLEMENT NONLETHAL PREDATOR CONTROL- Using funds made available for Wildlife Services Program operations, the Secretary shall make grants to operators of small ranch operations and associations composed primarily of operators of small ranch operations to assist an operator or association to implement and use nonlethal predator control to prevent, or reduce the likelihood of, wild animals preying on livestock or otherwise interfering with livestock operations.

(e) TRAINING AND TECHNICAL ASSISTANCE- Using funds made available for Wildlife Services Program operations, the Secretary shall provide operators of small ranch operations with training and technical assistance regarding the availability of nonlethal predator control op-

tions and the use of nonlethal predator control in their livestock operations.

(f) **RESEARCH- (1) IN GENERAL-** The Secretary shall conduct research, directly or through grants with appropriate entities, to determine the following: (A) The extent of the damage to livestock and livestock operations, particularly in western States, resulting from the depredations of predatory and other wild animals. (B) The environmental consequences of conducting Wildlife Services Program operations, particularly lethal predator control, to prevent or reduce predator damage to livestock and livestock operations. (C) The effectiveness of lethal predator control and nonlethal predator control under the Wildlife Services Program to protect livestock and livestock operations. (D) The overall populations of specific wildlife and predatory species on a regional, rather than State-by-State basis, with emphasis given to monitoring viable wildlife populations.

(2) **INFORMATION ON SHEEP LOSSES-** As one of the research projects conducted under paragraph (1), the Secretary shall enter into agreements with wool producers or other appropriate entities in not more than 12 sheep-raising districts in the western States, with varying degrees of predation problems, to promptly report sheep losses to predators in order to more accurately determine the extent to which predatory animals cause damage to the wool industry despite the use of, or in the absence of, lethal predator control and nonlethal predator control.

- **H.R. 5186 To amend the Public Health Service Act to establish scholarship and loan repayment programs regarding the provision of veterinary services in veterinarian shortage areas.**

Introduced by Charles Pickering (R-Mississippi) on September 14, 2000, and referred to the Committee on Commerce, and in addition to the Committee on Agriculture. This Act may be cited as the "Veterinary Health Enhancement Act."

SEC. 338M. SCHOLARSHIP AND LOAN REPAYMENT PROGRAMS REGARDING VETERINARY MEDICINE.

(a) **SCHOLARSHIP PROGRAM-** The Secretary, acting through the Administrator of the Health Resources and Services Administration, shall establish a program of entering into agreements with students under which the Federal Government provides to the students scholarships for attending schools of veterinary medicine in consideration of the students agreeing to provide, for a period of time specified in the agreement, veterinary services in veterinarian shortage areas.

(b) **LOAN REPAYMENT PROGRAM-** The Secretary, acting through the Administrator of the Health Resources and Services Administration, shall carry out a program of entering into agreements with veterinarians under which the veterinarians agree to provide, for a period of time specified in the agreement, veterinary services in veterinarian shortage areas in consideration of the Federal Government agreeing to repay, for each year of such service, not more than \$35,000 of the principal and interest of the educational loans of the veterinarians.

(c) **VETERINARIAN SHORTAGE AREAS-(1) IN GENERAL-** For purposes of this section, the term 'veterinarian shortage area' means any of the following: (A) An area in an urban or rural area (which need not conform to the geographic

boundaries of a political subdivision and which is a rational area for the delivery of veterinary services) that the Secretary determines has a shortage of veterinarians. (B) A population group that the Secretary determines has such a shortage. (C) A public or nonprofit private medical facility or other public facility that the Secretary determines has such a shortage.

(2) **STATE PARTICIPATION-** In designating a veterinarian shortage area in a State, the Secretary shall consult with the chief veterinary-medicine official of the State and with other appropriate entities in the State, including representatives of schools of veterinary medicine in the State; representatives of State members of professional associations regarding veterinary medicine; and representatives of large-animal veterinarians in the State.

The bill also authorizes appropriations of up to \$5 million for each of the fiscal years 2001 through 2005 for both the loan program and the scholarship program.

- **S.2329 To improve the administration of the Animal and Plant Health Inspection Service of the Department of Agriculture, and for other purposes.**

Introduced March 30, 2000, by Blanche Lincoln (D-Arkansas) and referred to the Committee on Agriculture, Nutrition, and Forestry.

Exempts any migratory bird management carried out by the Secretary of Agriculture through the Animal and Plant Health Inspection Service from the National Environmental Policy Act of 1969 (including regulations). Authorizes a[n APHIS] employee acting under the Migratory Bird Treaty Act to: (1) issue a depredation permit to a Service stakeholder or cooperator; and (2) manage and take migratory birds.

- **S. 2725 To provide for a system of sanctuaries for chimpanzees that have been designated as being no longer needed in research conducted or supported by the Public Health Service, and for other purposes.**

Introduced June 13, 2000, by Bob Smith (R-New Hampshire) and referred to the Committee on Health, Education, Labor, and Pensions. Ordered to be reported without amendment favorably to the Senate. This act may be cited as the "Chimpanzee Health Improvement, Maintenance and Protection Act." Related bill-H.R. 3514 (see *AWIC Bulletin* 10(3-4))

SEC. 2. ESTABLISHMENT OF NATIONAL SANCTUARY SYSTEM FOR FEDERALLY OWNED OR SUPPORTED CHIMPANZEES NO LONGER NEEDED FOR RESEARCH.

(a) **IN GENERAL-** The Secretary shall provide for the establishment and operation in accordance with this section of a system to provide for the lifetime care of chimpanzees that have been used, or were bred or purchased for use, in research conducted or supported by the National Institutes of Health, the Food and Drug Administration, or other agencies of the Federal Government, and

with respect to which it has been determined by the Secretary that the chimpanzees are not needed for such research (in this section referred to as 'surplus chimpanzees').

- **S. AMENDMENT 3710 (Amends H.R. 4577) To require that contracts for the care of research NIH chimpanzees be awarded to contractors that comply with the Animal Welfare Act**

Introduced by Arlen Specter (R-Pennsylvania) for Bob Smith (R-New Hampshire) on June 30, 2000. Agreed to in Senate by unanimous consent on June 30. [Editor's Note: H.R. 4577 is an act titled "Making appropriations for the Departments of Labor, Health and Human Services, and Education, and related agencies for the fiscal year ending September 30, 2001, and for other purposes." On June 14, 2000, the House passed H.R. 4577 as amended and sent it to the Senate. On June 30, 2000, the Senate amended and passed H.R. 4577. Currently, the House and Senate are resolving differences.]

At the appropriate place, add the following: 'None of the funds appropriated under this Act shall be expended by the National Institutes of Health on a contract for the care of the 288 chimpanzees acquired by the National Institutes of Health from the Coulston Foundation, unless the contractor is accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care International or has a Public Health Services assurance, and has not been charged multiple times with egregious violations of the Animal Welfare Act.'

- **S. Amendment 3982 (Amends H.R. 4461) To provide for an Animal and Plant Health Services wildlife services methods development study.**

Introduced July 20, 2000, by Thad Cochran (R-Mississippi) for Bob Smith (R-New Hampshire) and agreed to in Senate by unanimous consent. [Editor's Note: H.R. 4461 is a bill titled "Making appropriations for Agriculture, Rural Development, Food and Drug Administration and Related Agencies programs for the fiscal year ending September 30, 2001, and for other purposes." On July 11, 2000, the House passed H.R. 4461 as amended and sent it to the Senate. On July 20, 2000, the Senate amended and passed H.R. 4461. Currently, the House and Senate are resolving differences.]

On page 20, line 8, strike the '.' and insert in lieu thereof the following: ': Provided further, That no less than \$1 million of the funds available under this heading made available for wildlife services methods development, the Secretary of Agriculture shall conduct pilot projects in no less than four states representative of wildlife predation of livestock in connection with farming operations for direct assistance in the application of non-lethal predation control methods: Provided further, That the General Accounting Office shall report to the Committee on Appropriations by November 30, 2001, on the Department's compliance with this provision and on the effectiveness of the non-lethal measures.

UPDATE

- **H. R. 2929 To amend title 18, United States Code, to prohibit certain conduct relating to elephants.**

Introduced September 23, 1999, by Sam Farr (D-California) and referred to the Committee on the Judiciary. On October 6, 1999, it was referred to the Subcommittee on Crime which held hearings on June 13, 2000. This Act may be cited as the "Captive Elephant Accident Prevention Act of 1999."

SEC. 2. ELEPHANT SHOWS AND RIDES.

(a) IN GENERAL- Chapter 89 of title 18, United States Code, is amended by adding at the end the following: Sec. 1822. Elephant shows and rides

(a) Whoever, in or affecting interstate or foreign commerce, knowingly makes available any elephant for—(1) use in a travelling show or circus; or (2) the purpose of allowing individuals to ride that elephant; shall be fined under this title or imprisoned not more than 1 year, or both. In the case of a conviction of a person who has previously been convicted for another offense under this section, the offender shall be fined under this title or imprisoned not more than 2 years, or both.

(b) In this section, the term 'travelling show or circus' means a show or circus that spends most of its working time each year away from its permanent facility.

- **S.1109 A bill to conserve global bear populations by prohibiting the importation, exportation, and interstate trade of bear viscera and items, products, or substances containing, or labeled or advertised as containing, bear viscera, and for other purposes.**

Introduced May 24, 1999, by Mitch McConnell (R-Kentucky) and referred to the Committee on Environment and Public Works. On July 26, 2000, it was ordered to be reported [to the Senate] without amendment favorably. This act may be cited as the "Bear Protection Act of 1999." Related Bills: H.R.2166

Bear Protection Act of 1999 - Prohibits any person from: (1) importing bear viscera into, or exporting it from, the United States; or (2) selling bear viscera, bartering, offering it for sale or barter, or purchasing, possessing, transporting, delivering, or receiving it in interstate or foreign commerce. Subjects persons who violate such prohibitions to specified penalties. Waives such prohibition for wildlife law enforcement purposes where a valid permit has been issued.

Requires the Secretary of the Interior and the Secretary of State to discuss issues involving such trade with the appropriate representatives of countries that are the leading importers, exporters, or consumers of such products. Requires the Secretary of the Interior to report to Congress on the progress of efforts to end illegal trade in bear viscera.

To find out the status of these or any other bills, contact the congressional bill status line at (202) 225-1772. This information is also available on the World Wide Web at <http://thomas.loc.gov/bss/d106query.html> (106th Congress).

Senate Report on Cockfighting

[Editor's Note: I thought it would be useful for people to understand the considerations that go into the passage of an amendment to the Animal Welfare Act. This particular piece of legislation would close a loophole related to transport of birds for cockfighting. What follows is a report from the Senate Committee on Agriculture, Nutrition, and Forestry.]

ANIMAL WELFARE ACT AMENDMENTS

79-010

Calendar No. 555

106TH CONGRESS

Report

SENATE

2d Session

106-297

ANIMAL WELFARE ACT AMENDMENTS

Mr. LUGAR, from the Committee on Agriculture, Nutrition, and Forestry, submitted the following

REPORT

[To accompany S. 345]

The Committee on Agriculture, Nutrition, and Forestry, to which was referred the bill (S. 345) to amend the Animal Welfare Act to remove the limitation that permits interstate movement of live birds, for the purpose of fighting, to States in which animal fighting is lawful, having considered the same, reports favorably thereon and recommends that the bill do pass.

CONTENTS	Page
I. Purpose, need and background	1
II. Legislative history and votes in the Committee	2
III. Regulatory impact statement	2
IV. Budgetary impact of the bill	2
V. Changes in existing law	4

I. PURPOSE, NEED AND BACKGROUND

This legislation will close a loophole in the Animal Welfare Act (AWA) that allows for the interstate transport of gamecocks for fighting purposes from states where cockfighting is illegal to states where cockfighting is legal. This change will bring consistency to the law, treating birds as other animals are treated by preventing interstate transport for fighting purposes, closing a significant loophole in the law.

This legislative change will also help law officers enforce cockfighting bans in the 47 states in which cockfighting has been banned. The three states where cockfighting is legal are: New Mexico, Louisiana, and Oklahoma. This bill would not prohibit cockfighting in those states where it is currently legal.

This loophole in the AWA undermines the ability of state and local law officers to enforce their state bans. Cockfighters elude prosecution in states where the practice is illegal by claiming that they are raising fighting birds for shipment to states where it is still lawful. Thus, the AWA loophole compromises the effectiveness of the state laws.

This bill will not affect the ownership or use of live birds for food and for show purposes.

II. LEGISLATIVE HISTORY AND VOTES IN COMMITTEE

COMMITTEE VOTE

In compliance with paragraph 7 of rule XXVI of the Standing Rules of the Senate, the following statements are made concerning the votes of the Committee in its consideration of the bill:

The Committee met in open session on Thursday, March 2, 2000, to mark up this bill. The bill was agreed to by voice vote. The Committee then ordered that the bill be favorably reported.

III. REGULATORY IMPACT STATEMENT

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the following evaluation is made concerning the regulatory impact of enacting this legislation:

Under current law, the transport of any animal (except live birds) for fighting purposes is prohibited between states. This legislation bans the interstate movement of live birds for fighting purposes. Thus, under this bill, breeders of birds would not be allowed to ship their birds across state lines if the birds were to be used for fighting. Cockfighting is currently legal in only three states. The Congressional Budget Office has estimated that the cost to breeders of birds from the prohibition on interstate movement would be below the annual threshold for private sector mandates. The Committee does not anticipate an adverse impact on the personal privacy of individuals affected by this legislation or an increase in paperwork or recordkeeping requirements.

IV. BUDGETARY IMPACT OF THE BILL

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate, the following letter has been received from the Congressional Budget Office regarding the budgetary impact of the bill:

U.S. Congress,
Congressional Budget Office,
Washington, DC, March 27, 2000.

Hon. RICHARD G. LUGAR,
Chairman, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 345, a bill to amend the Animal Welfare Act to remove the limitation that permits interstate movement of live birds, for the purpose of fighting, to states in which animal fighting is lawful.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts are Dave Hull (for federal costs) and Jean Wooster (for the private-sector impact).

Sincerely,
Barry B. Anderson
(For Dan L. Crippen, Director).
Enclosure.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

S. 345—A bill to amend the Animal Welfare Act to remove the limitation that permits interstate movement of live birds, for the purpose of fighting, to states in which animal fighting is lawful.

CBO estimates that implementing S. 345 would not result in any significant cost to the federal government. Because en-

actment of S. 345 could affect direct spending and receipts, pay-as-you-go procedures would apply to the bill, however, CBO estimates that any impact on direct spending and receipts would not be significant. S. 345 contains no intergovernmental mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

S. 345 would impose a new private-sector mandate as defined by UMRA. CBO estimates that the cost to comply with the mandate would fall below the annual threshold established under UMRA for private-sector mandates (\$100 million in 1996, adjusted for inflation).

Under current law, any person is prohibited from transporting or delivering a dog or other animal—with the exception of live birds—between states to participate in an animal fighting venture. S. 345 would amend the Animal Welfare Act to remove that exception and ban the interstate movement of live birds for the purpose of fighting. Such fighting is legal in

Louisiana, New Mexico, and Oklahoma and the possession of gamecocks with the intent to fight is legal in 21 states. S. 345 would prohibit the gamefowl breeders in those 21 states from transporting their birds with the intent to fight to the three states where such fighting is legal. The bill would not prohibit the gamefowl breeders from exporting their birds with the intent to fight or from transporting them for reasons other than to fight. According to industry and government sources, the net income derived from the legal sales of live birds for the purpose of fighting is less than \$100 million a year. Therefore, the cost to those breeders to comply with the new prohibition, measured as lost income, would be below the annual threshold for private-sector mandates.

Because S. 345 would ban the interstate movement of live birds for the purpose of fighting, the federal government would be able to pursue cases that it otherwise would not be able to prosecute. CBO expects that any increase in federal costs for law enforcement, court proceedings, or prison operations would not be significant, however, because of the small number of cases likely to be involved. Any such additional costs would be subject to the availability of appropriated funds.

Because those prosecuted and convicted under S. 345 could be subject to criminal fines, the federal government might collect additional fines if the bill is enacted. Collections of such fines are recorded in the budget as governmental receipts (revenues), which are deposited in the Crime

Victims Fund and spent in subsequent years. CBO expects that any additional receipts and direct spending that would result from enacting this bill would not be significant.

The CBO staff contacts for this estimate are Dave Hull (for federal costs), and Jean Wooster (for the private-sector impact). This estimate was approved by Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

V. CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made in the bill, as reported, are shown as follows: existing law proposed to be omitted is enclosed in black brackets, new material is printed in *italic*, existing law in which no change is proposed is shown in roman.

ANIMAL WELFARE ACT AMENDMENTS

SEC. 26. (7 U.S.C. 2156)

(a) It shall be unlawful for any person to knowingly sponsor or exhibit an animal in any animal fighting venture to which any animal was moved in interstate or foreign commerce.

(b) It shall be unlawful for any person to knowingly sell, buy, transport, or deliver to another person or receive from another person for purposes of transportation, in interstate or foreign commerce, any dog or other animal for purposes of having the dog or other animal participate in an animal fighting venture.

(c) It shall be unlawful for any person to knowingly use the mail service of the United States Postal Service or any interstate instrumentality for purposes of promoting or in any other manner furthering an animal fighting venture except as performed outside the limits of the State of the United States.

[Struck out->] (d) Notwithstanding the provisions of subsections (a), (b), or (c) of this section, the activities prohibited by such subsections shall be unlawful with respect to fighting ventures involving live birds only if the fight is to take place in a State where it would be in violation of the laws thereof.]<-Struck out]

[Struck out->] (e)]<-Struck out] (d) Any person who violates subsection (a), (b), or (c) shall be fined not more than \$5,000 or imprisoned for not more than 1 year, or both, for each such violation.

[Struck out->] (f)]<-Struck out] (e) The secretary or any other authorized by him shall make such investigations as the Secretary deems necessary to determine whether any person has violated or is violating any provision of this section, and the Secretary may obtain the assistance of the Federal Bureau of Investigation, the Department of the Treasury, or other law enforcement agencies of the United States, and State and local governmental agencies, in the conduct of such investigations, under cooperative agreements with such agencies. A warrant to search for and seize any animal which there is probable cause to believe was involved in any violation of this section may be issued by any judge of the United States or of a State court of record or by a United States magistrate within the district wherein the animal sought is located. Any United States marshal or any person authorized under this section to conduct investigations may apply for and execute any such warrant, and any animal seized under such a warrant shall be held by the United States marshal or other authorized person pending disposition thereof by the court in accordance with this paragraph (f). Necessary care including veterinary treatment shall be provided while the animals are so held in custody. Any animal involved in any violation of this section shall be liable to be proceeded against and forfeited to the United States at any time on complaint filed in any United States district court or other court of the United States for any jurisdiction in which the animal is found and upon a judgment of forfeiture shall be disposed of by sale for lawful purposes or by other humane means, as the court may direct. Costs incurred by the United States for care of animals seized and forfeited under this section shall be recoverable from the owner of the animals if he appears in such forfeiture proceeding or in a separate civil action brought in the jurisdiction in which the owner is found, resides, or transacts business.

[Struck out->] (g)]<-Struck out] (f) For purposes of this section—

(1) the term 'animal fighting venture' means any event which involves a fight between at least two animals and is conducted for purposes of sport, wagering, or entertainment except that the term 'animal fighting venture' shall not be deemed to include any activity the primary purpose of which involve the use of one or more animals in hunting another animal or animals, such as waterfowl, bird, raccoon, or fox hunting;

(2) the term 'interstate or foreign commerce' means—(A) any movement between any place in a State to any place in another State or between places in the same State through another State; or (B) any movement from a foreign country into any State;

(3) the term 'interstate instrumentality' means telegraph, telephone, radio, or television operating in interstate or foreign commerce;

(4) the term 'State' means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and any territory or possession of the United States;

(5) the term 'animal' means any live bird, or any live dog or other mammal, except man; and

(6) the conduct by any person of any activity prohibited by this section shall not render such person subject to the other sections of this Act as a dealer, exhibitor, otherwise.

[Struck out->] (h) [Struck out] (g)(1) The provisions of this Act shall not supersede or otherwise invalidate any such State, local, or municipal legislation or ordinance relating to animal fighting ventures except in case of a direct and irreconcilable conflict between any requirements thereunder and this Act or any rule, regulation, or standard hereunder. ■

Grants...

• Merial Control of Pain Award

Three prizes are available for top entries to the Merial Control of Pain Award.

An outstanding research program of sustained endeavor (over 10 years) by a researcher or recognized research group will receive a grand prize of \$5,000. A veterinary student or other young scientist who has pursued a doctoral research program in a recognized veterinary institution will receive a \$1,500 award for the best veterinary thesis. A \$1,500 award will be given to a veterinarian (in general practice) for preparing the best published or unpublished clinical report.

Applications for the awards must be received by November 30, 2000. Recipients will be announced at the British Small Animal Veterinary Association meeting, April 2001 in Birmingham, England. For information about the application process, contact Dr. Jean-Louis Foraz, Merial, Lyon, France, by phone, (33) 4-72-72-30-35, or e-mail: jean-louis.foraz@merial.com.

• International Foundation for Ethical Research Fellowships in Animal Welfare

The International Foundation for Ethical Research (IFER) is pleased to announce the availability of Graduate Fellowships in Animal Welfare. IFER is dedicated to development and implementation of scientifically valid alternatives to the use of animals in research, product testing, and education. IFER is also committed to programs designed to increase public awareness of such alternatives. The purpose of these Fellowships in Animal Welfare is to provide monetary assistance to graduate students whose programs of study seem likely to have an impact in one or more of these areas.

Awards

The fellowships will provide \$12,500 annually in stipendary support and \$2,500 for supplies per year. The fellowships are renewable annually for up to 3 years. Continued funding is dependent on student progress and availability of funds.

Eligibility

Application is open to students enrolled in Master's and Ph.D. programs.

Sample Areas of Interest

IFER has supported research in the following areas, however, this list is not intended to be exhaustive: tissue, cell, and organ cultures; clinical studies using animals or humans; epidemiological studies; enhanced use of existing tissue repositories and patient databases; public education; and computer modeling.

Application

Submit a proposal that meets the following guidelines:

1. Application may be submitted by a faculty member for an identified student or a student to be named. Graduate student applicants must have an identified faculty sponsor.
2. Include a descriptive title.
3. Include an abstract of no more than 100 words.
4. Include a brief (no more than 2 typewritten pages) description of the proposed graduate project and how it will affect the 4 R's directly or enhance public awareness of the 4 R's.
5. Include a specific description of the proposed project (no more than 2 typewritten pages) including the methods used for evaluation of student performance and progress and a plan for dissemination of relevant knowledge during and after performance of the project.
6. Include a bibliography citing relevant source materials.
7. Provide a 2-page curriculum vitae for the faculty sponsor.
8. Provide a brief description of your organization and the facilities available for this project.

Our greatest interest is in how the proposed project will enhance the student's involvement in issues of animal welfare and how the project's outcome will affect the use of animals in research, product testing, and education. Please keep this in mind when preparing your application, and please be specific.

Send application materials to: Animal Welfare Fellowships, The International Foundation for Ethical Research, 53 West Jackson Boulevard, Suite 1552, Chicago, Illinois 60604

Further information may be obtained from Peter O'Donovan, Executive Director, IFER (312) 427-6025 or email: ifer@miint.net. ■

Paper Trails Protect Pets

The U.S. Department of Agriculture (USDA) and the research industry both want to ensure that stolen and lost animals, especially pets, are not used in research. One way this is accomplished is through tracebacks conducted by USDA inspectors. In order for USDA to follow these paper trails, research facilities must continue to do their part in maintaining certification records in accordance with Animal Welfare Act (AWA) regulations.

AWA regulations (Title 9, Code of Federal Regulations, Part 2, Section 2.133) require dealers selling random source dogs or cats to get certification from the original source acknowledging that the animal they acquired could be used for research or educational purposes. The dealer must provide this certification to the research facility, under § 2.133 paragraph (b)(4). Research and educational facilities must keep certifications on file while these random-source animals are at their facility and for three years after, under paragraph (f). If an animal is transferred to another facility, a copy of the certification must accompany the animal, under paragraph (g).

The full regulations are available at the USDA Animal Care web site at <http://www.aphis.usda.gov/ac/publications.html> under the heading "AWA, Regulations, and Standards." Questions may be addressed to your regional Animal Care office or e-mail to ace@usda.gov. ■

Announcements...

MEETINGS

- **Laboratory Animal Science Association (LASA-United Kingdom)**

The LASA Winter Scientific Meeting will be held from November 29 to December 1, 2000 (venue to be confirmed). The meeting in 1999 was the largest ever, attracting 249 delegates, 11 of whom were from overseas. There was a large trade exhibition with 81 trade delegates. The program consisted of 10 scientific sessions and workshops and a number of posters. This year's meeting will take place in the same kind of prestigious and stimulating setting as has been the custom in recent years and details of the program will appear in the next two issues of the journal. Anyone wishing to submit a poster or requiring further information should contact the LASA Secretariat, PO Box 3993, Tamworth, Staffs B78 3QU, UK, phone: +(0)1827 259130, fax: +(0)1827 259188, e-mail: LASA@globalnet.co.uk, <http://www.lasa.co.uk/>.

- **2001 Pathology of Mutant Animal Models Meeting**

The Pathology of Mutant Animal Models 2001 meeting will be held February 15-17, 2001, at Baylor College of Medicine in Houston, Texas. The interactive format of the 2001 conference will include lectures, case presentations, and a poster session.

Lecture topics are expected to include Pathologic Characterization of Mutant Mice, Rodent Clinical Pathology, Background Lesions and the Significance of Strain Variability, Early Embryonic Death and Neonatal Lethality, Quality Assurance (infectious disease) Issues in Maintaining and Evaluation of Mutant Mice, Mutant Fish Models, Immunophenotyping, Musculoskeletal Phenotyping and Dental Pathology, Cardiovascular Phenotyping and the Effects of Strain, and Pathology on Behavioral Evaluations.

Case presentations and poster presentations on pathology of mutant animals of any species will be invited. Final details, registration forms, and submission forms for posters and case presentations are posted on the CLDavis web site at <http://www.afip.org/CLDavis/CLDavis.meetings.htm#transgenics>

To continue to maintain reasonable registration fees and to promote participation by students and residents in accordance with the foundation's mission to promote continuing education and the advancement of veterinary and comparative pathology, it is likely that most of conference materials will be provided in electronic format to reduce copying costs. In addition, corporate sponsorship of speakers, meals, or a reception would be welcome.

For more information, please contact Dr. Cory Brayton at cbrayton@bcm.tmc.edu.

- **Second European Zoo Nutrition Conference**

Marwell Zoological Park is pleased to announce that it will be hosting this conference in co-operation with the European Association of Zoos and Aquariums Research Group and the University of Southampton. The conference will be held on April 6-9, 2001, in Southampton, United Kingdom. Several specific session themes with keynote speakers have already been identified:

- Ungulates
- Fish
- Parrots
- Analytical & Research Methods in Zoo Nutrition

Further sessions will be determined by the abstract submissions received, and both oral presentations and poster sessions are planned. The conference will be of interest to anyone involved in the formulation of diets for captive wild animals. Register your interest by joining the conference mailing list, and you'll receive the information automatically.

To join the conference mailing list, please send your contact details by e-mail to: Nutrition2001@marwell.org.uk or by post/fax to: Zoo Nutrition 2001, Marwell Zoological Park, Owslebury, Winchester, Hampshire, SO21 1JH, United Kingdom, fax: (0) 1962 777511 or visit the conference web site at <http://www.marwell.org.uk/n2000-03-18a.htm>.

- **Network for Animal Health and Welfare in Organic Agriculture**

3rd NAHWOA Workshop: Human-animal relationships: management, housing and ethics
The aim of the 3rd Workshop for the Network for Animal Health and Welfare in Organic Agriculture (NAHWOA) is to discuss and exchange views on issues related to human-animal relationships in organic livestock production. The workshop will be held in Clermont-Ferrand, France, October 21-24, 2000.

The topic is considered in its widest context, and papers are expected to cover issues from housing design and farm management strategies to stockmanship and human motivation in animal husbandry. The conference will include:

- 1st Session: Stockmanship: The ethics of human-animal relationships and the role of farmer
- 2nd Session: Stockmanship: motivation and evaluation
Working groups based on the two morning sessions: "Stockmanship: how to evaluate and improve?"
Presentation on French organic livestock production (Michel Bouilhol), field visit and lunch
- 3rd Session: Presentations on ongoing or planned research from network partners and others
- 4th Session: Housing for organic livestock
Working groups: Housing, health, welfare: Are there conflicts and where should the priorities be?

For more information contact: Malla Hovi, P.O. Box 236, Department of Agriculture, University of Reading, READING RG6 6AT, UK, e-mail: m.hovi@reading.ac.uk, or visit the conference web site at <http://www.veeru.reading.ac.uk/organic/3rd%20NAHWOA%20prelim.htm>.

- **Animal Welfare Considerations in Livestock Housing Systems**

The meeting will be held at Technical University of Zielona Góra, Poland, on October 24 - 26, 2001. The symposium will be hosted by the Technical University of Zielona Góra and guided by the International Commission of Agricultural Engineering. The symposium language will be English. The main topics of the symposium are:

- Farm animal welfare: the contemporary context
- Testing methodologies, techniques and equipment
- Influence of housing systems on animal health

- Influence of housing systems and stockperson attitude on animal welfare
- Environmental effects on animal stress, behavior and productivity
- Effect of animal welfare considerations on technical solutions of livestock housing and equipment
- Animal welfare in the context of other concerns about animal agriculture
- Genetic aspects of animal welfare
- Economic constraints and incentives in promoting farm animal welfare

Registration fee will be around EURO 270 - 320 covering registration, proceedings, welcome party, and conference dinner. For more information, visit the conference web site at <http://www.pz.zgora.pl/cigr/> or contact the Conference Secretariat: Department of Agricultural Building, Agricultural University of Wrocław, Pl. Grunwaldzki 24, 50 363 Wrocław, Poland, phone: +48 71 320 55 26, fax: +48 71 320 55 84, e-mail: ibr@ozi.ar.wroc.pl or Prof. Tadeusz Kuńczyski, Technical University of Zielona Góra, ul. prof. Zygmunta Szafrana 2, 65 016 Zielona Góra, Poland, fax: +48 71 337 13 82, e-mail: t.kuczynski@wm.pz.zgora.pl.

RESOURCE

• Health and Safety in Laboratory Animal Facilities

This handbook provides guidance on assessing hazards and risks and how to eliminate and minimize them. It also emphasizes that each facility is unique and must be assessed locally by competent persons familiar with all aspects. This book is recommended to all professionals working with laboratory animals. It covers the extent and range of hazards in animal facilities, including the physical problems associated with buildings and plant. Specific areas of concern include infection, allergy, genetic manipulation, chemicals, and radiation. It provides the latest guidance on safety management and the law. Although oriented principally towards conditions in the U.K., it reflects current best practice so will be of value to a much wider readership.

Laboratory Animal Handbooks No. 13, ISBN 1-85315-421-0, 249 pages. To order, send a check for £35/US \$70 plus £2 /US \$4 post and packing made payable to Royal Society of Medicine Press Ltd. Telephone or send a credit card number with expiration date to:

Hodder, Doyle, Meadows Ltd., Station Road, Linton, Cambs, CB1 6UX, UK, phone: +44 (0) 1223 893855, fax: +44 (0) 1223 893852.

• Federation of Riding for the Disabled International

The new edition of the Federation of Riding for the Disabled International (FRDI), Directory of Education and Training (5th ed, 2000) is available. Information is included from 29 countries on how instructors and therapists are trained, including details of written and video materials used.

The price is US \$25; DM 12; AU \$42; £16. For more information, contact Norma Pearce at FRDI office, Secretariat, PO Box 416 Ascot Vale, Australia 3032. In North America, contact Octavia Brown, President, FRDI; email: brown@centenarycollege.edu; fax 908-234-0304.

• Primate Materials Available for Research

The National Institute on Aging (NIA) Aging Cell Repository has assembled panels of primate materials for distribution. These panels contain samples from the following nonhuman primates: ring-tailed lemur, black-handed spider monkey, woolly monkey, red-bellied tamarin, pig-tailed macaque, rhesus macaque, orangutan, gorilla, chimpanzee, and bonobo. These sam-

ples are available either as fibroblast cultures or DNA. Additional information can be obtained at <http://locus.umdj.edu/nia> or by contacting: The NIA Aging Cell Repository, Coriell Cell Repositories, 401 Haddon Avenue, Camden, NJ 08103, phone: 800-752-3805 (U.S. only), (856) 757-4848 from other countries, fax: (856) 757-9737, e-mail: ccr@arginine.umdj.edu.

• Seminar on Isolated Perfused Organs-Abstracts

The abstracts of papers presented at the 38th Scientific Meeting of GV-SOLAS - Gesellschaft für Versuchstierkunde - Society of Laboratory Animal Science are available at The topics covered include general aspects, mucous membrane, skin, lung, udder, bone, kidney, liver, uterus, and intestine. The conference was held in September 2000 in Essen, Germany.

AVAILABLE ON THE WORLD WIDE WEB

• Animal Sheltering Online

<http://www.animalsheltering.org>

An excellent resource for news and information about community animal control, animal care, and animal protection. This is a project of the Humane Society of the United States.

• Animal Welfare Codes of Recommendations and Minimum Standards

<http://www.maf.govt.nz/MAFnet/issues/animal/codes.html>

From the Ministry of Agriculture and Forestry, New Zealand (Te Manatu Ahuwhenua, Ngaherehere) Also includes links to the National Animal Ethics Advisory Council and the Animal Welfare Advisory Committee. An excellent resource.

• Animal Welfare and the Ethics of Animal Use

<http://www.ethics.ubc.ca/resources/animal>

Links to WWW resources.

• Animal Welfare Program at the University of British Columbia

<http://www.agsci.ubc.ca/animalwelfare/>

Debate continues over the humane treatment of animals in agriculture, research, sport, and companionship. The University of British Columbia has established an Animal Welfare Program to address these issues through teaching, research, and public education.

• Cells Alive

<http://www.cellsalive.com/>

A great educational resource using video clips and graphics to explain many biological processes such as cell division in cancer cells and bacteria, HIV infection, allergy and mites, and my favorites, bacteriophages (or "Oh Goodness, my E. coli has a Virus!") and OUCH! The anatomy of a splinter. Many more subjects are listed.

• Currency Converter

<http://oanda.com/converter/classic>

FXConverter: 164 Currency Converter is the web's most popular multi-lingual foreign exchange calculator to date. Get the exchange rates for over 164 currencies.

• Environmental Issues Resource Centre

http://adminsrv.usask.ca/psci/psc_db/

This resource has been developed by Prairie Swine Centre, Inc., a nonprofit research corporation that conducts applied research in pork production. This site contains a review of the scientific literature and Canadian legislation dealing with intensive livestock units and their relationship to the environment. Users

can choose to read a chapter summarizing each of the 14 issues areas identified or conduct their own research using the database. Searches can be conducted by subject or key words to identify the more than 500 scientific references.

- **Federal Wildlife and Related Laws**

<http://www.fws.gov/laws/federal/summaries/index.html>
Statute summaries from the U.S. Fish and Wildlife Service.

- **FishBase: A Global Information System on Fishes**

<http://www.fishbase.org/>

FishBase is a relational database with fish information to cater to different professionals such as research scientists, fisheries managers, zoologists, and many more. As of July 2000, FishBase on the web contains practically all fish species known to science. FishBase was developed at the International Center for Living Aquatic Resources Management (ICLARM) in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and many other partners, and with support from the European Commission (EC).

- **Internet Law Library-Legal Treatment of Animals**

<http://law.etext.org/91.htm>

The information at this site is from the former U.S. House Internet Law Library. A compilation of Federal, international, and State laws, regulations, and guidelines.

- **Middle East Regional Veterinary Information System Project**

<http://www.move-in.org/projects/proj-fmd.html>

During recent years, Egypt, Israel, Jordan, and the Palestinian Authority have jointly initiated a number of animal health activities in a regional context. The implementation of various co-operative animal health projects should improve the control of animal diseases, zoonoses, and the quality and safety of animal products.

- **References for Animal Pain, Stress, and Capture Myopathy**

<http://www.npwrc.usgs.gov/resource/tools/telemetry/refanim.htm>

From the U.S. Geological Survey's Northern Prairie Wildlife Research Center. Check out the other information available from the Northern Prairie Biological Resources link.

- **State Wildlife Laws Handbook**

<http://www.fws.gov/laws/state/intro.html>

Produced by the Center for Wildlife Law at the University of New Mexico.

- **Watch Corn Grow!**

<http://www.iowafarmer.com/corncam/corn.html>

Research not going the way you expected? Take a break. Count the ears in this Iowa cornfield. See it tassel. Cheer as the mighty cornstalks battle wind, hail, and rainstorms. Bring your friends back to see the plants as they reach for the sky. Bored by the corn? Then stop by and say hello to Soybean Cam. The new camera is up and running in one of Linn County farmer John Munier's soybean fields. Better hurry. See it at <http://www.iowafarmer.com/soycam/index.htm>. ■

Animal Welfare Stays at NIH

Most everyone now knows that the former Office for Protection from Research Risks (OPRR) Division of Animal Welfare has a new name and elevated status at the National Institutes of Health (NIH). It is now the Office of Laboratory Animal Welfare, or OLAW, and has Office (as opposed to Division) status within the NIH Office of Extramural Research.

Why did the OPRR Division of Animal Welfare remain at NIH, while the Division of Human Subjects was organizationally placed at the Department of Health and Human Services? This is a complex question, but the following facts about OLAW may shed some light on the matter:

OLAW's primary function is the administration of the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals. The statutory authority for this policy was clearly delegated by Congress to the director of NIH. The opening sentence of the enabling legislation, the Health Research Extension Act of 1985, Public Law 99-158 (November 20, 1985), reads "...The Secretary, acting through the Director of NIH, shall establish guidelines for...proper care of animals...proper treatment of animals...used in research..."

Public Law 99-158 also clearly associates the requirements of the PHS policy with grant and contract mechanisms administered by NIH. That is, compliance with the requirements of the PHS Policy is a condition of receiving a grant or contract from the NIH (or other PHS agency). Thus it is appropriate that OLAW be located within the NIH Office of Extramural Research, the primary administrative and policy office for NIH grants.

As part of the NIH research community, OLAW effectively performs in a mode of education, consultation, and collaboration. This emphasis is crucial as the PHS policy is based on a system of institutional self-regulation. Institutions are required to report noncompliance to OLAW and are expected to seek advice as necessary; they must be able to develop appropriate corrective actions without fear of regulatory reprisal.

Appropriate animal care and use are integral parts of good research. They can affect research findings, reproducibility of results, and reliability. Accordingly, OLAW's focus is supportive of the research enterprise as opposed to being strictly regulatory. The PHS policy approach towards noncompliance stems directly from language in Public Law 99-158, which states that the NIH Director shall suspend or revoke a grant or contract only after an institution has been given reasonable opportunity to take corrective actions. In nearly all instances of noncompliance, the goal of OLAW is therefore to facilitate compliance and ensure that mechanisms are in place to prevent recurrence so important research may go forward, rather than to punish noncompliance.

For additional information about OLAW, the PHS policy, or Public Law 99-158, visit OLAW's web site at: <http://grants.nih.gov/grants/olaw/olaw.htm>. ■

"Meeting the Information Requirements of the Animal Welfare Act"

The Animal Welfare Information Center (AWIC) of the U.S. Department of Agriculture, National Agricultural Library (NAL) has developed a 2--day workshop for individuals who are responsible for providing information to meet the requirements of the Animal Welfare Act. Representatives from NIH, Office of Protection from Research Risks, and USDA's APHIS, Animal Care will be available for questions and answers. The workshop will be held at NAL in Beltsville, Maryland.

The act requires that investigators provide Institutional Animal Care and Use Committees (IACUC) with documentation demonstrating that a thorough literature search was conducted regarding alternatives. An alternative is any procedure that results in the reduction in the numbers of animals used, refinement of techniques, or replacement of animals.

The objectives of the workshop are to provide:

- an overview of the Animal Welfare Act and the information requirements of the act.
- a review of the alternatives concept.
- a comprehensive introduction to NAL, AWIC, and other organizations.
- instruction on the use of existing information databases/networks.
- online database searching experience.

This workshop is targeted for principal investigators, members of IACUC's, information providers, administrators of animal use programs, and veterinarians. All participants will receive a resource manual.

The 2001 workshops will be held on March 21-22, June 20-21, and October 24-25.

The workshop will be limited to 20 people, so please sign up quickly. There is no fee for the workshop.

For more information, contact AWIC at phone: (301) 504-6212, fax: (301) 504-7125, e-mail: awic@nal.usda.gov, <http://www.nal.usda.gov/awic> or write to: Animal Welfare Information Center, U.S. Department of Agriculture, National Agricultural Library, 10301 Baltimore Avenue, Beltsville, MD 20705--2351 ■

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write the USDA, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal employment opportunity provider and employer.

United States Department of Agriculture
Agricultural Research Service
National Agricultural Library
AWIC Newsletter Staff
10301 Baltimore Ave.
Beltsville, MD 20705-2351

OFFICIAL BUSINESS
Penalty for Private Use, \$300
ANIMAL WELFARE INFORMATION CENTER BULLETIN
ISSN 1522-7553

If changes are required to your mailing address, enter them on the label and return it or a copy of it to the above address. If you wish to be removed from the mailing list for this publication check here ____ and return this page or a copy of it to the above address.

Animal Welfare Information Center Bulletin
(ISSN 1522-7553)

is published quarterly and distributed free of charge by the National Agricultural Library (NAL). The Animal Welfare Information Center Bulletin provides current information on animal welfare to investigators, technicians, administrators, exhibitors, and the public. Mention of commercial enterprises or brand names does not constitute endorsement or imply preference by the U.S. Department of Agriculture. Articles appearing in this newsletter do not necessarily represent positions or policies of the U.S. Department of Agriculture or any agency thereof.

Tim Allen, Editor
D'Anna Jensen, Production and Design
<http://www.nal.usda.gov/awic>

BULK RATE
POSTAGE AND FEES PAID
USDA
PERMIT NO. G95